KYOCERA

CONTAX S2

Repair Manual

KYOCERA CORPORATION
Optical Equipments Group
Service Dept. 921230

CONTENTS

A. DESCRIPTION OF MECHANISM

Features ---------- A- 2
Specifications ---------- A- 3
Circuit Block Diagram ---------- A- 6
Sequence Flowchart ---------- A- 7
Description of Electric Circuitry ---------- A- 8
Description of Switches ---------- A-13
Description of IC Terminals ---------- A-14
Description of Electric Parts ---------- A-18
Schematic Diagram ---------- A-21

B. DISASSEMBLY & REASSEMBLY PROCEDURE

Removal of Exterior Parts ---------- B- 2
Removal of Main FPC Ass'y ---------- B- 6
Removal of Mirror Box Ass'y & Shutter Unit ---------- B-11
Disassembly of Winding Mechanism ---------- B-15
Disassembly of Mirror Box Ass'y ---------- B-25
Other Parts ---------- B-30

C. ADJUSTMENT PROCEDURE AND OTHERS

Adjustments of Winding Mechanism ---------- C- 2
Adjustments of Other Mechanisms ---------- C- 4
Other Adjustments ---------- C- 8
Electric Parts on Main FPC ---------- C-18
Test Lands on Main FPC ---------- C-20
Wiring Diagram ---------- C-21

A. DESCRIPTION OF MECHANISM

FEATURES

1. **Extra-Reliable, Mechanically Controlled High-Speed Shutter ---- 1/4000 sec. max. and 1/250 sec. flash synch.**

   A full fourteen speed, vertically running metal shutter is mechanically controlled, offering a wide range of image freezing or blurring possibilities ---- all the way from a very fast 1/4000 sec. to an extra slow 1 sec., plus the unlimited lengthy "bulb" setting. Additionally, this mechanical flash offers a very fast shutter speed flash synchronization at 1/250 sec., or slower if greater creativity is desired. Thus even under adverse weather and other conditions, the shutter can be accurately, precisely activated at all speeds, and completely without reliance in battery power.

2. **Enhanced Body Rigidity and Working Reliability - Titanium top/bottom/front casings, strengthened aluminum diecast body, dust/moisture resistant construction**

   Superior durability is a byword for the CONTAX S2's construction. By using titanium for the top and bottom covers as well as the front mount section, and adding this to a highly rigid aluminum diecast body, the camera's precision internal mechanisms are well protected, especially against extreme external shock. Also, a number of soft rubber protectors and seals are used in conjunction with major working parts so as to make the camera more resistant to dust, moisture and adverse weather conditions than conventionally designed SLRs.

3. **Highly Accurate Pinpoint Metering System ---- Spot-Metering System**

   To ensure top precision in light measurement, the tried-and proven spot-metering is employed in the CONTAX S2. The light sensor thus measures the brightness of the heavily weighted area essentially equal to that covered by the microprism ring (approx. ϕ 5mm) in the center of the viewfinder screen, and is thus not influenced by illumination outside this critical subject area. This reading is then transferred to the overexposure, shutter speed, B, underexposure readout at the right of the viewfinder screen. Similar in style to classic match-needle metering, an LED readout is used, instead of a mechanical needle, because it is faster acting and requires less battery power.

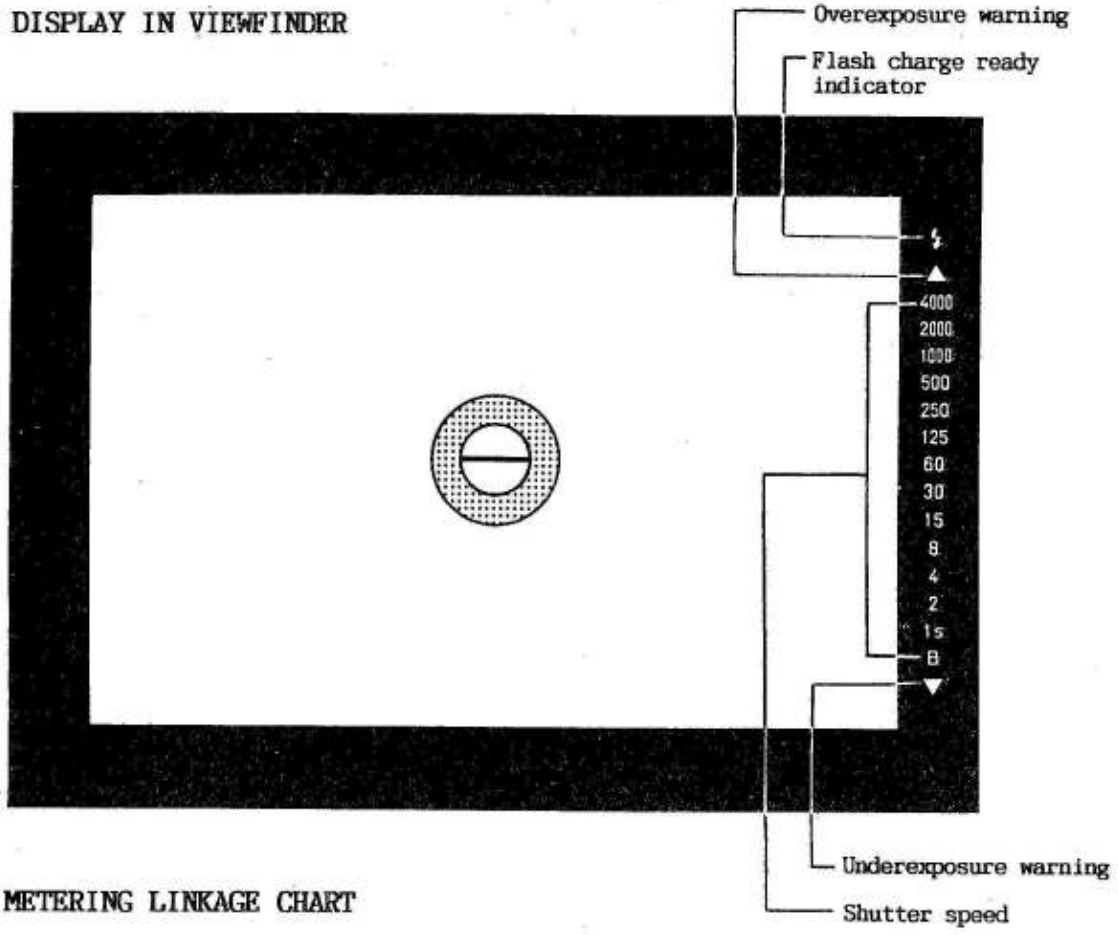
CONTAX S2 SPECIFICATIONS

Type	: 35mm metal focal-plane shutter SLR camera
Lens mount	: Contax/Yashica mount
Shutter	: Mechanically controlled, vertically-running metal focal-plane shutter
Shutter Speeds	: B (bulb), 1 sec.～ 1/4000 sec.
Flash Synch.	: X setting at 1/250 sec. or slower (w/direct X contact and synch. terminal)
Selftimer	: Mechanical (delay of approx. 10 sec.)
Shutter Release	: Mechanical (w/cable release socket, release lock)
Exposure Control	: Manual, TTL spot (approx. ø 5mm) metering coupled with viewfinder panel readout
Metering Range	: EV4～20 (ISO 100, f/1.4)
Film Speed Setting	: Manual, ISO 12～6400
Viewfinder	: Fixed eye-level pentaprism finder (long eyepoint) ; 95% field-of-view ; 0.82x magnification (w/standard 50mm lens at∞)
Focusing Screen	: Horizontal split/microprism center spot on matte field (standard) ; interchangeable
Display in Viewfinder	: LEDs for (top to bottom) flash indicator, overexposure warning, shutter speeds (in use, preferred), underexposure warning
Film Loading	: Easy-loading multi-slotted take-up spool
Film Advance	: Manual by lever with 30° stand-off angle, full 135° for advance
Film Rewind	: By pushing rewind button and turning rewind crank
Exposure Counter	: Mechanical, auto-resetting, additive type
Multiple Exposure	: Available using mechanical multi-exposure lever, auto-resetting
Accessory Shoe	: Direct X-contact (flash ready with dedicated flash units)
Back Cover	: Pull up rewind knob release ; Film advance indicator
Power Source (for exposure meter)	: Two 1.5V alkaline (LR44) or two 1.55V silver oxide (SR44) batteries

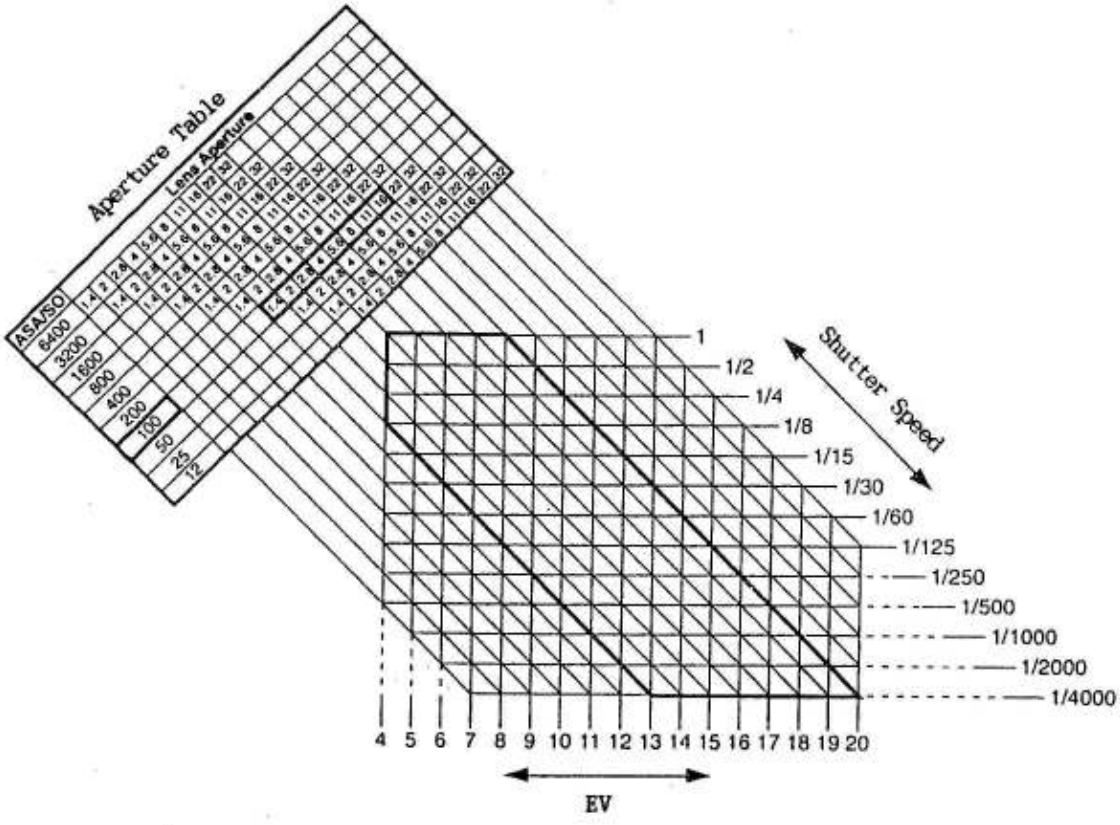
Battery Check	: Automatic (viewfinder battery check mark blinks if power is insufficient)
Depth-of-Field	: Preview button
Dimensions and Weight	: 134.5 (W) X 89 (H) X 51 (D) mm (5-5/16 X 3-1/2 X 2 inches), approx. 565g (20 oz.)(w/o batteries)

* Specifications and design are subject to change without notice.

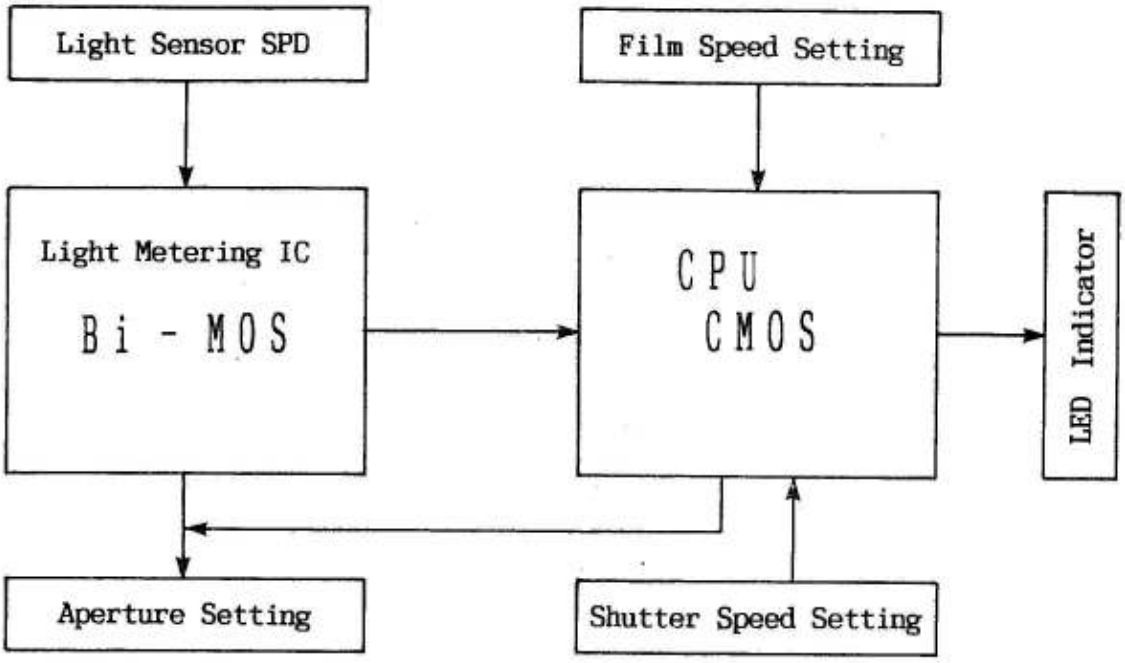
DISPLAY IN VIEWFINDER



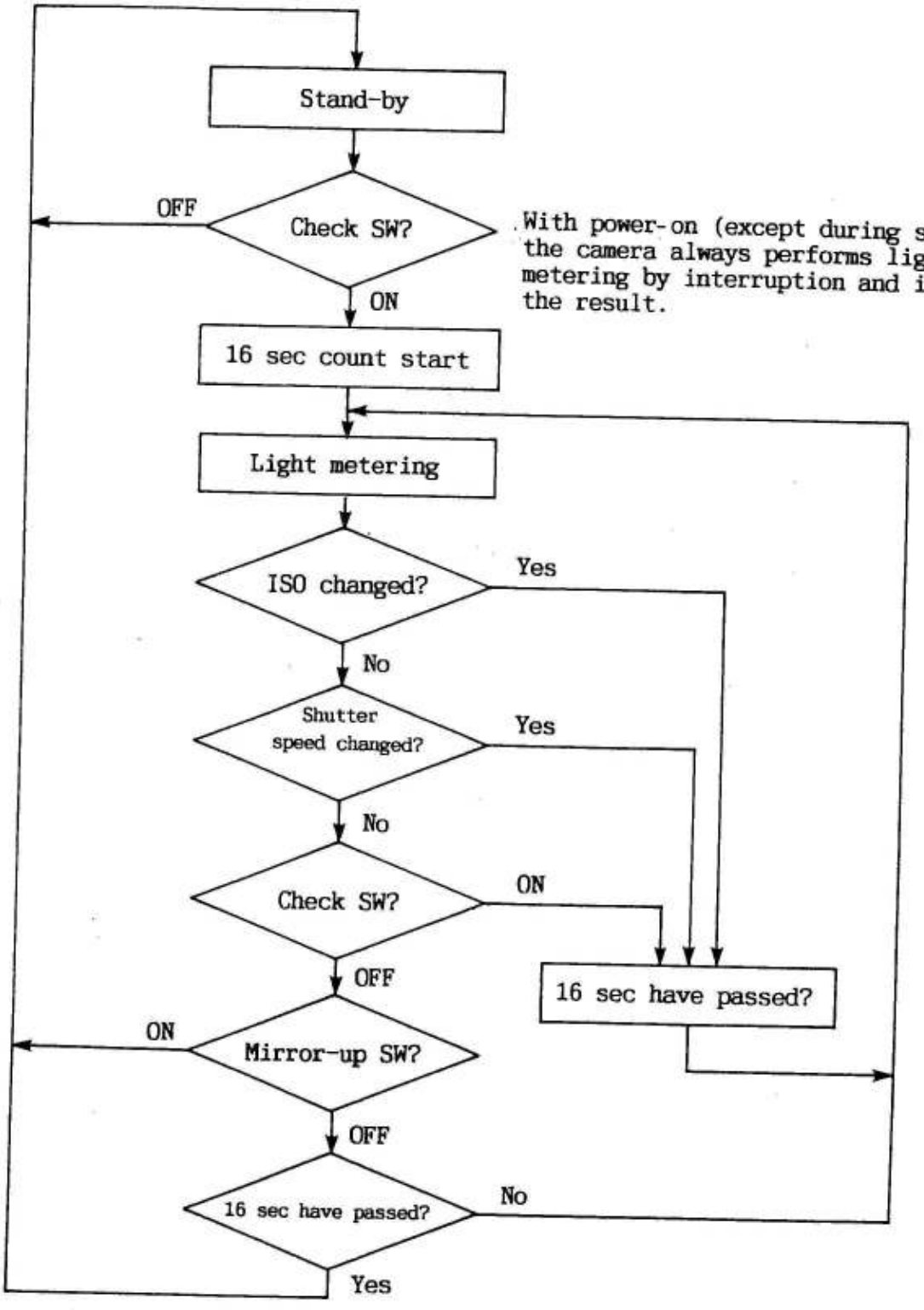
METERING LINKAGE CHART



CIRCUIT BLOCK DIAGRAM



SEQUENCE FLOWCHART



With power-on (except during stand-by), the camera always performs light metering by interruption and indicates the result.

DESCRIPTION OF ELECTRIC CIRCUITRY

Light Metering Circuit

1. Outline

The photocurrent flowing in the SPD at the top of the eyepiece is dual slope integrated by the analog IC. The result of integration is operated by the CPU and indicated by the LEDs in the viewfinder.

2. Functions

①The aperture data is input to the analog IC via the slide resistor. The CPU calculates an optimum shutter speed from the analog IC output and ISO code data. And the set value and optimum value of shutter speed are indicated by the LEDs in the viewfinder.

②The CPU operates the analog switch (IC4) and shuts off the input of aperture data to the analog IC. From the analog IC, the CPU receives the data proportional to exposure, which is independent of the aperture, and, according to the data, switches the brightness (2 levels) of the LED in the viewfinder.

3. Operation

①PORT51 (4 pin) is turned to "Hi" to turn ON the analog switch (IC4).

②PORT52 (5 pin) is turned to "Lo" for 10 msec. (SP signal is output.)

③The analog IC is charged according to the exposure of the SPD and the aperture value while the CLOCK. IN terminal (connected to PORT52) is turned to "Lo"(for 10 msec). And it starts discharge when the CLOCK. IN terminal turns "Hi". The COMP. OUT terminal is kept to "Lo" from the start of charge to the end of discharge.

④The output from the COMP. OUT terminal is inverted by Q11 and is inputed to the PORTC2 (14 pin) and $\overline{\text{SIRQ}}$ (16 pin) terminals of the CPU.

⑤From this pulse width and ISO data (input through PORT40 to 43, PORTC0), the CPU calculates an optimum shutter speed.

⑥PORT51 (4 pin) is turned to "Lo" to turn OFF the analog switch (IC4).

⑦Like ②, PORT52 (5 pin) is turned to "Lo" for 10 msec.
(SP signal is output.)

⑧The analog IC is charged according to the exposure of the SPD (independent of aperture value) while the CLOCK. IN terminal (connected to PORT52) is turned to "Lo" (for 10 msec). And it starts discharging when the CLOCK. IN terminal turns "Hi". The COMP. OUT terminal is kept to "Lo" from the start of charge to the end of discharge.

⑨Like ④,the output from the COMP. OUT terminal is inverted by Q11 and is inputed to the PORTC2 (14 pin) and $\overline{\text{SIRQ}}$ (16 pin) terminals of the CPU.

⑩ From this pulse width, the CPU calculates the brightness of the subject.

⑪ The CPU receives the set value of shutter speed through PORT30 to 33 (38,40, 41 and 42 pins) and outputs the set value and optimum value of shutter speed to the LEDs in the viewfinder by driving Q21 to 25 through PORT00 to 21 (26 to 35 pins).

⑫ When the brightness of the subject calculated at ⑩ is LV8 or below, "Hi" is outputed from PORT50 (3 pin) and Q28 is turned ON to lower the brightness of the LED. When the brightness of the subject is LV9 or above, "Lo" is outputed from PORT50 (3 pin) and Q28 is turned ON to raise the brightness of the LED. When it is between LV8 and LV9, the brightness of the LED is kept as before.

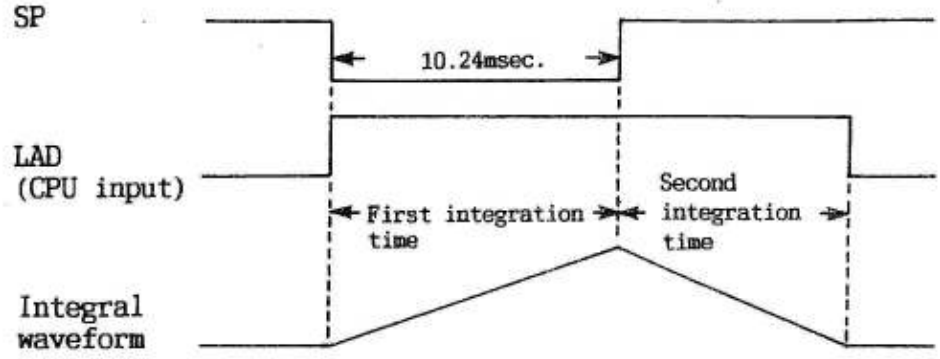


Table 1 Relationship between integration time and shutter time at ISO100

2nd integration time (msec.)	Shutter speed indication	2nd integration time (msec.)	Shutter speed indication
0 ~ 0.128	▲	6.528 ~ 6.656	30 · 60
0.128 ~ 0.256	▲	6.656 ~ 6.784	30 · 60
0.256 ~ 0.384	▲	6.784 ~ 6.912	30 · 60
0.384 ~ 0.512	▲	6.912 ~ 7.040	30
0.512 ~ 0.640	▲	7.040 ~ 7.168	30
⋮	⋮	7.168 ~ 7.296	15 · 30
2.176 ~ 2.304	▲	7.296 ~ 7.424	15 · 30
2.304 ~ 2.432	▲	7.424 ~ 7.552	15 · 30
2.432 ~ 2.560	4000	7.552 ~ 7.680	15
2.560 ~ 2.688	4000	7.680 ~ 7.808	15
2.688 ~ 2.816	2000 · 4000	7.808 ~ 7.936	8 · 15
2.816 ~ 2.944	2000 · 4000	7.936 ~ 8.064	8 · 15
2.944 ~ 3.072	2000 · 4000	8.064 ~ 8.192	8 · 15
3.072 ~ 3.200	2000	8.192 ~ 8.320	8
3.200 ~ 3.328	2000	8.320 ~ 8.448	8
3.328 ~ 3.456	1000 · 2000	8.448 ~ 8.576	4 · 8
⋮	⋮	⋮	⋮
4.224 ~ 4.352	500 · 1000	9.216 ~ 9.344	2 · 4
4.352 ~ 4.480	500	9.344 ~ 9.472	2 · 4
4.480 ~ 4.608	500	9.472 ~ 9.600	2
4.608 ~ 4.736	250 · 500	9.600 ~ 9.728	2
4.736 ~ 4.864	250 · 500	9.728 ~ 9.856	1 · 2
4.864 ~ 4.992	250 · 500	9.856 ~ 9.984	1 · 2
4.992 ~ 5.120	250 · 500	9.984 ~ 10.112	1 · 2
5.120 ~ 5.248	250	10.112 ~ 10.240	1
5.248 ~ 5.376	250	10.240 ~ 10.368	1
5.376 ~ 5.504	125 · 250	10.368 ~ 10.496	▼
5.504 ~ 5.632	125 · 250	10.496 ~ 10.624	▼
5.632 ~ 5.760	125	10.624 ~ 10.752	▼
5.760 ~ 5.888	125	⋮	⋮
5.888 ~ 6.016	60 · 125	19.840 ~ 19.968	▼
6.016 ~ 6.144	60 · 125	19.968 ~ 20.096	▼
6.144 ~ 6.272	60 · 125	20.096 ~ 20.224	▼
6.272 ~ 6.400	60	20.224 ~ 20.352	▼
6.400 ~ 6.528	60	20.352 ~ 20.480	▼

BC Circuit

1. Outline

The analog IC detects B1 level (2.5V) and gives a warning indication. At 2.4V or below, the reset IC stops all functions of the camera.

2. Functions

① The indications of light metering value and set value blink in the viewfinder at 1 Hz when the power voltage comes to 2.5V or below.

② All the functions of the camera stop when the power voltage drops to 2.4V or below.

3. Operarion

① At power ON by turning ON the check switch, PORT00 (26 pin) and PORT02 (28 pin) are turned to "Hi" at the same time for 4 msec.

② Q12 turns ON and current flows through R25.

③ The power voltage is divided by R01, R02 and VR5, and is inputed to the VJB terminal (22 pin) of the analog IC and compared with the reference voltage (Vs) inside the IC. And the "Hi" signal is outputed from the BATT terminal (23 pin) when the power voltage comes to 2.5V or below.

④ The BATT terminal is connected to PORT23 (37 pin) of the CPU. When the input to this port turns "Hi", the CPU blinks the indication in the viewfinder at 1 Hz.

⑤ When the power voltage drops to 2.4V or below, the output from the reset IC (IC3) turns "Lo". Then the $\overline{\text{RST}}$ terminal (24 pin) turns "Lo" and the CPU stops all the functions of the camera.

Power-Hold

1. Outline

The power is automatically turned off if 16 seconds pass without any change of ISO setting or shutter speed setting with the check switch in OFF position. Even before the 16 seconds pass, the power will be turned OFF immediately if the shutter is released or preview operation is made.

2. Functions

① Holds the power for 16 seconds, as a rule.

② Maintains the power hold when the check switch is kept ON.

③ Holds the power for 16 seconds after turning ON and then OFF the check switch.

④ Holds the power for 16 seconds after change of ISO setting or shutter speed setting.

⑤ Turns the power OFF immediately after the shutter release or the preview operation.

⑥ Turns the power ON only by turning ON the check switch.

3. Operation

① When 16 seconds have passed without any change of the ISO or shutter dial setting with the check switch turned OFF (with PORTB0 (8 pin) turned "Hi"), "Lo" is outputed from PORT53 (7 pin), the power to the analog IC is turned OFF and the CPU comes to STOP status. (At the same time, the oscillator stops oscillating.)

② Counting of 16 seconds is not performed when the check switch is ON.

③ Counting is started when the check switch is turned ON and then OFF.

④ After detection of change of ISO setting (PORT40 to 43, C0) or shutter speed setting (PORT30 to 33), counting of 16 seconds is started from the beginning.

⑤ When the mirror-up switch (PORTC3) is turned ON with the check switch in ON position, the camera does not come to STOP till the detection of the turning-OFF of both switches. However, these two switches are connected with a diode so that the mirror-up switch is not turned ON singly. (This state occurs at shutter release or preview operation.)

⑥ Once the power is turned OFF, it is not turned ON until a rise edge is inputed to PORTB0 to B3. (Check switch only)

DESCRIPTION OF SWITCHES

1. Check Switch

Location of switch: Under the shutter release

Condition of switch ON:

The check switch is turned ON when the shutter release is pressed halfway down.

Functions of switch:

① Power is turned ON by turning ON the check switch.

② Power-hold is maintained by turning ON the check switch.

③ When the check switch and the mirror-up switch are turned ON at the same time, the power is turned OFF after the detection of the turning-OFF both switches.

2. Mirror-up Switch

Location of switch: In the lower part of the mirror box

Condition of switch ON:

The mirror-up switch is turned to ON in interlock with the aperture stop-down mechanism.

Functions of switch:

After the mirror-up switch is turned to ON and then OFF, the power is turned to OFF at the turning-OFF of the check switch.

DESCRIPTION OF IC TERMINALS

IC1 (CPU)

Pin No.	Terminal Name	I/O	Symbol	Description of Terminal
01	PORT42	IN	ISO2	ISO code input terminal 2
02	PORT43	IN	ISO3	ISO code input terminal 3
03	PORT50	OUT	KID0	LED brightness switching output
04	PORT51	OUT	A.SW	Analog switch control output
05	PORT52	OUT	SP	SP signal output
06	NC			NC
07	PORT53	OUT	Vcc.CONT	Vcc control output
08	PORTB0	IN	CHECK.SW	Check switch input
09	PORTB1	IN	A.CHECK1	Amplifier check input 1
10	PORTB2	IN	A.CHECK2	Amplifier check input 2
11	PORTB3			NC
12	PORTC0	IN	ISO4	ISO code input terminal 4
13	PORTC1			NC
14	PORTC2	IN	LAD	LAD signal input (same as $\overline{\text{SIRQ}}$)
15	PORTC3	IN	M.UP.SW	Mirror-up switch input
16	$\overline{\text{SIRQ}}$	IN	LAD	LAD signal input (same as PORTC2)
17	$\overline{\text{IRQ}}$			NC
18	Vss		GND	GND
19	OSC1		OSC1	Ceramic oscillator (2 MHz) input terminal 1
20	OSC2		OSC2	Ceramic oscillator (2 MHz) input terminal 2
21	V_{DD}		VBAT	VBAT
22	XI			NC
23	XO			NC
24	$\overline{\text{RST}}$	IN	$\overline{\text{RST}}$	Reset input (connected to 2.4V reset IC output terminal)

IC1 (CPU)

Pin No.	Terminal Name	I/O	Symbol	Description of Terminal		
25	$\overline{\text{SYNC}}$			NC		
26	PORT00	OUT	COM0	▲	30	Indication by LEDs in viewfinder 1/8 duty
27	PORT01	OUT	COM1	4000	15	
28	PORT02	OUT	COM2	2000	8	
29	PORT03	OUT	COM3	1000	4	
30	PORT10	OUT	COM4	500	2	
31	PORT11	OUT	COM5	250	1	
32	PORT12	OUT	COM6	125	B	
33	PORT13	OUT	COM7	60	▼	
34	PORT20	OUT	SEG0	▲ 4000 2000 1000 500 250 125 60		
35	PORT21	OUT	SEG1	30 15 8 4 2 1 B ▼		
36	PORT22			NC		
37	PORT23	IN	B1	B1 warning signal input		
38	PORT30	IN	SHUTTER0	Shutter code input terminal 0		
39	NC			NC		
40	PORT31	IN	SHUTTER1	Shutter code input terminal 1		
41	PORT32	IN	SHUTTER2	Shutter code inout terminal 2		
42	PORT33	IN	SHUTTER3	Shutter code input terminal 3		
43	PORT40	IN	ISO0	ISO code input terminal 0		
44	PORT41	IN	ISO1	ISO code input terminal 1		

IC2 (Analoge IC)

Pin No.	Terminal Name	I/O	Symbol	Description of Terminal
01	Ph1			SPD cathode (same as 3 pin)
02	Ph2			SPD anode
03	Ph1			SPD cathode (same as 1 pin)
04	Phc			Capacitor connection between this and Ph1
05	OFFSET1			Offset adjusting terminal 1 of light metering amplifier
06	OFFSET2			Offset adjusting terminal 2 of light metering amplifier
07	Jr		Jr	Vr adjusting feedback terminal
08	Vr		Vr	Reference voltage in IC (Vs + 288mV) adjusted by VR2
09	Vs		Vs	Reference voltage in IC (Vcc - 1.4V)
10	NC			NC
11	NC			NC
12	NC			NC
13	NC			NC
14	NC			NC
15	VF		VF	Aperture data input terminal (input from apeature board)
16	VA		VA	ISO data input terminal (input fixed by RO4 and RO5)
17	VJ		VJ	Exposure (inclination) adjusting input terminal
18	Vcc		Vcc	Vcc
19	REF.IN			NC
20	NC			NC
21	REF.OUT			NC
22	VJB			Comparator input for B1 level detection (Resistance-devided input to V BAT)
23	BATT			Output terminal for B1 level detection

IC2 (Analog IC)

Pin No.	Terminal Name	I/O	Symbol	Description of Terminal
24	SUP			Capacitor and resistor connecting terminal for speed-up circuit
25	COMP.OUT			LAD signal output terminal
26	CLOCK.IN			SP signal input terminal
27	RF			Integration clamp resistor connection
28	INT.IN			Terminal for connecting integration resistor and capacitor
29	BUF.OUT			Buffer output
30	INT.OUT			Integration output
31	$\overline{\text{SUP}}$			Capacitor and resistor connecting terminal for speed-up circuit
32	GND		GND	GND

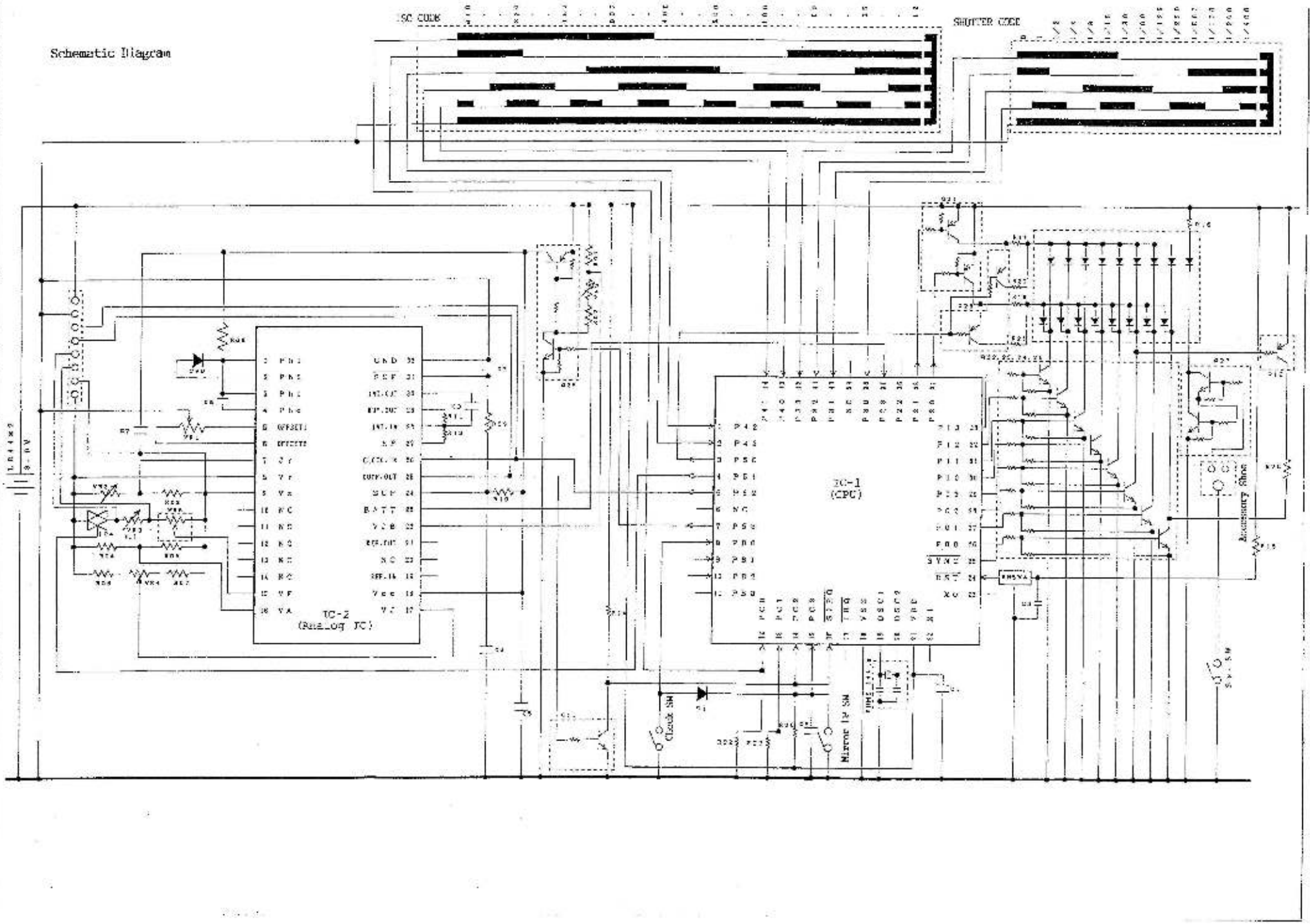
DESCRIPTION OF ELECTRIC PARTS

Symbol	Name	Function
IC1	CPU	Light metering calculation Indication Battery check
IC2	Analog IC	Light metering Battery check
IC3	Reset IC	CPU hard reset
IC4	Analog switch	Switch between normal light metering (incl. aperture data) and subject brightness measuring
Q11	NPN digi. tra.	LAD signal inversion
Q12	PNP digi. tra.	Battery check dummy load ON-OFF
Q21	PNP digi. tra.X 2	LED drive (SEG. side)
Q22	NPN digi. tra.X 2	LED drive (COM. side)
Q23	NPN digi. tra.X 2	LED drive (COM. side)
Q24	NPN digi. tra.X 2	LED drive (COM. side)
Q25	NPN digi. tra.X 2	LED drive (COM. side)
Q26	NPN, PNPTr + R	Vcc ON - OFF
Q27	NPN digi. tra.X 2	Drive of flash charge ready LED
Q28	PNP digi. tra.X 2	LED brightness switching resistor ON-OFF
VR1	Semifixed resistor	Offset adjustment
VR2	Semifixed resistor	Vr adjustment
VR3	Semifixed resistor	Resistance adjustment for aperture stop-down
VR4	Semifixed resistor	Exposure (inclination) adjustment
VR5	Semifixed resistor	B1 level adjustment
R01	Resistor 30K	B1 level adjusting resistance
R02	Resistor 7.5K	B1 level adjusting resistance
R03	Resistor 30K	Vr adjusting resistance
R04	Resistor 30K	ISO dividing resistance (dummy)
R05	Resistor 18K	ISO dividing resistance (dummy)

Symbol	Name	Function
R06	Resistor 22K	Exposure adjusting resistance
R07	Resistor 7.5K	Exposure adjusting resistance
R08	Resistor 300K	Output stabilizing resistance
R09	Resistor 510K	Starting speed-up circuit for light metering
R10	Resistor 220K	Starting speed-up circuit for light metering
R11	Resistor 100K	Integration resistance
R12	Resistor 100K	Integration clamp resistance
R13	Missing No.	
R14	Resistor 100K	Pull-up resistance for LAD inversion
R15	Resistor 3.3K	Input smoothing resistance for reset IC
R16	Resistor 300	Current limiting resistance for flash charge ready LED
R17	Resistor 750	Current limiting resistance for shutter speed LED
R18	Resistor 750	Current limiting resistance for shutter speed LED
R19	Missing No.	
R20	Resistor 300	Current limiting resistance for LED brightness adjustment
R21	Resistor 300	Current limiting resistance for LED brightness adjustment
R22	Resistor 1M	PORTC0 pull-down resistance
R23	Resistor 1M	PORTC1 pull-down resistance
R24	Missing No.	
R25	Resistor 200	B1 check dummy load
R26	Resistor 510K	Current limiting resistance for release switch delay
C1	Tantalum capacitor 10μ	CPU power (V BAT) smoothing capacitor
C2	Ceramic capacitor 0.1μ	Vs level smoothing capacitor
C3	Ceramic capacitor 0.1μ	Integration capacitor
C4	Ceramic capacitor 0.015μ	Starting speed-up circuit for light metering

Symbol	Name	Function
C5	Tantalum capacitor 1μ	Analog IC power (Vcc) smoothing capacitor
C6	Ceramic capacitor 30P	SPD stabilizing capacitor
C7	Ceramic capacitor 0.047μ	Starting speed-up circuit for light metering
C8	Ceramic capacitor 0.047μ	Input voltage smoothing capacitor for reset IC
C9	Tantalum capacitor 1μ	Release switch delay circuit
D1	Diode	Check switch ON by release ON
SPD	SPD	Light metering SPD
X'tal	Ceramic oscillator	Generation of CPU main clock (FB resistor and capacitor incorporated

Schematic Diagram



B. DISASSEMBLY & REASSEMBLY PROCEDURE

Removal of Exterior Parts

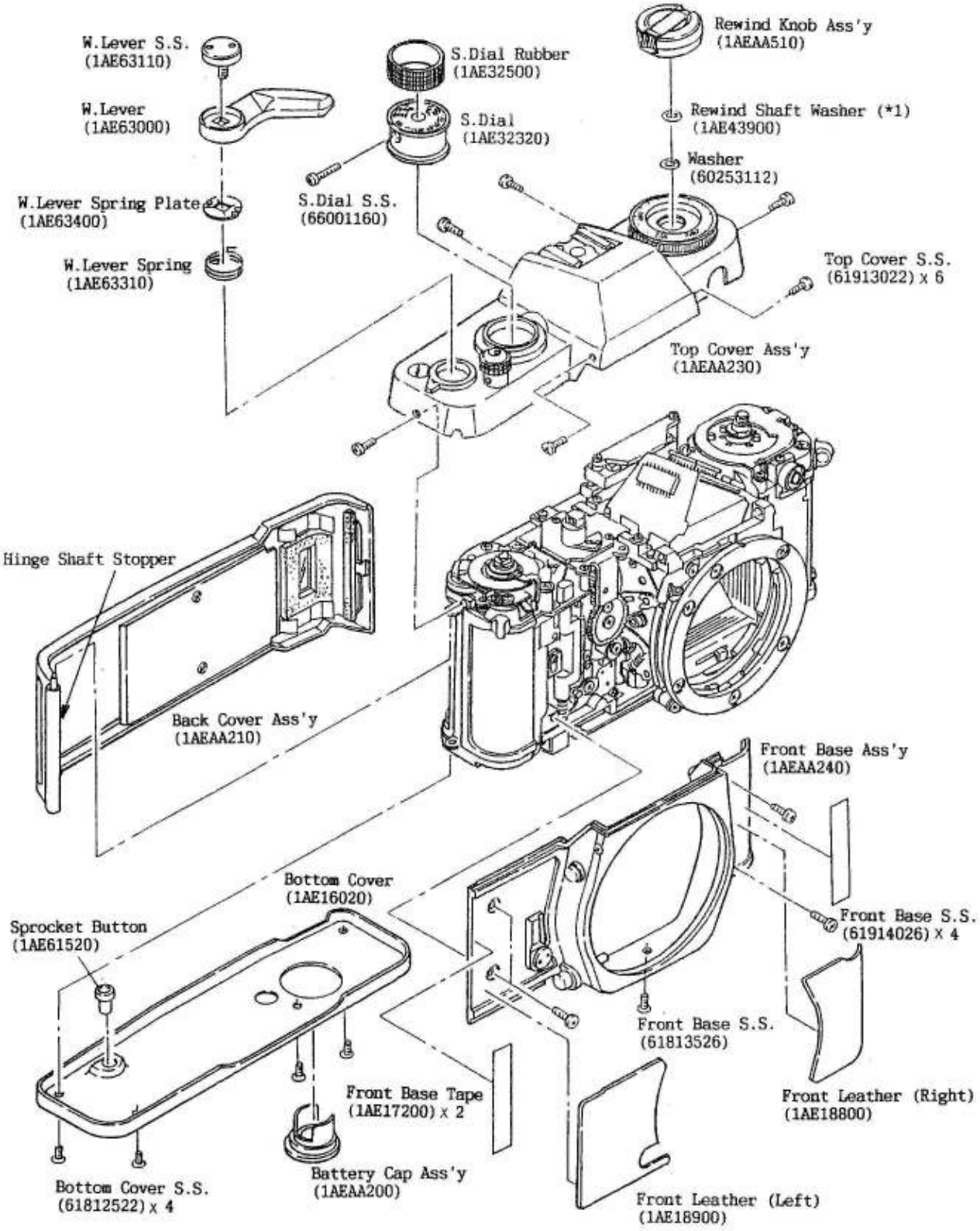


Fig.1

B-1 REMOVAL OF EXTERIOR PARTS

B-1-1 Removal of Back Cover Ass'y

1) Open the Back Cover Ass'y (1AEAA210) by pulling up the Rewind knob Ass'y. Remove the Back Cover Ass'y while pressing down the Hinge Shaft Stopper.

B-1-2 Removal of Bottom Cover

1) Remove the Battery Cap Ass'y (1AEAA200).

2) Remove the Bottom Cover Setscrews (61812522) X 4.

3) Remove the Bottom Cover (1AE16020) and Sproket Button (1AE61520).

B-1-3 Removal of Top Cover Ass'y

1) Remove the W. Lever Setscrew (1AE63110).

   Notes:

   a) The W. Lever Setscrew is a reverse screw.

   b) Since the W. Lever Setscrew is locked with Loctite, take due care when removing it.

2) Remove the W. Lever (1AE63000), W. Lever Spring Plate (1AE63400) and W. Lever Spring (1AE63310).

3) Position the "60" on the S. Dial (1AE32320) at the Shutter Speed Index on the Top Cover.

4) Remove the S. Dial Rubber (1AE32500) and then the S. Dial Setscrew (66001160).
   Remove the S. Dial (1AE32320).

5) Remove the Rewind Knob Ass'y (1AEAA510) and Washer (60353112).

   Note:

   a) The Rewind Shaft Washer (1AE43900) (Polyslider t: 0.25), marked with *1, is used to correct the idling torque of the Rewind knob, when it is too low.

6) Remove the Top Cover Setscrews (61913022) X 6.

7) Unsolder (see Fig.2) the green, orange and black lead wires coming from the Hot Shoe while holding up the Top Cover Ass'y (1AEAA230) and then remove the Top Cover Ass'y.

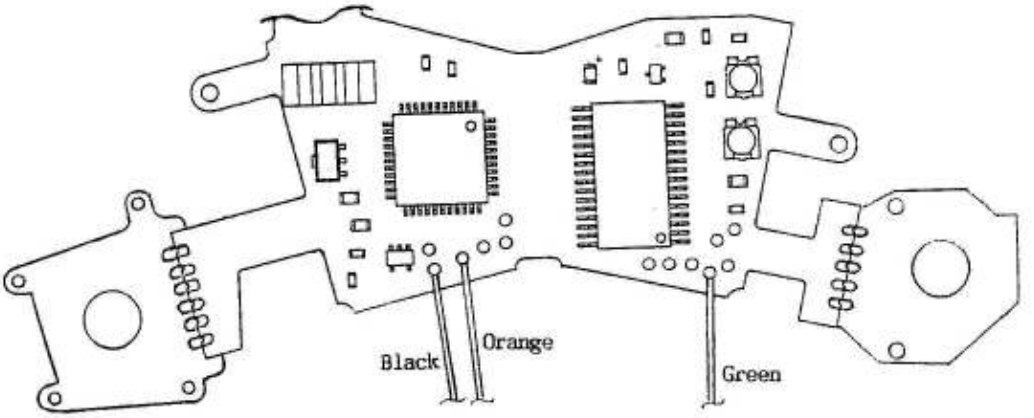


Fig.2

[Notes on Reassemly of Top Cover Ass'y]

a) Fit the cut portion of the ME Lever (15966310) on the ME Interlock Lever (1AE67800) when installing the Top Cover Ass'y.

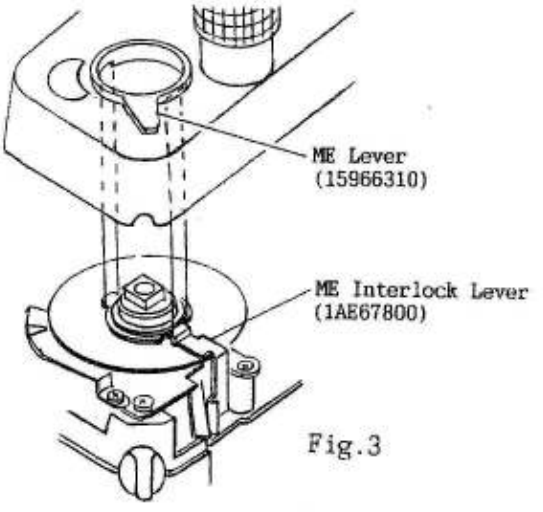


Fig.3

b) Position the pins of the ISO Contact Base Ass'y (1AEAA390) as shown in Fig.3 (at ISO 100). When installing the Top Cover Ass'y, position the "100" of the ISO Dial at the ISO Index on the Top Cover.

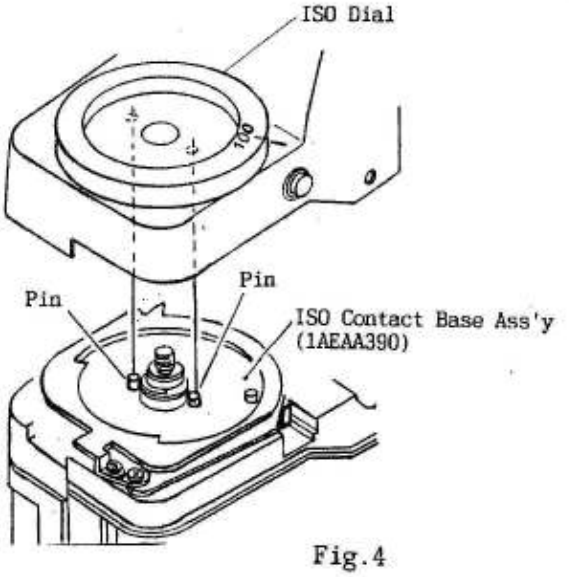


Fig.4

B-1-5 Removal of Front Base Ass'y

1) Peel off the Leather (Right) (1AE18810).

2) Peel off the Leather (Left) (1AE18910).

Notes:

a) The Leather (left) may be removed without removing the Selftimer Lever.

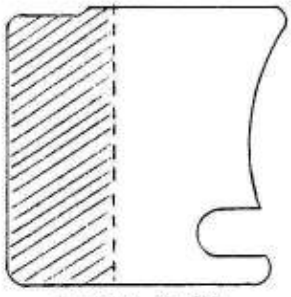
b) Use the Front Base Tapes (1AE17200) X 2 to correct the misalignment of the leather surfaces between the Front Base and the Body.

3) Remove the Front Base Setscrews (61813526) and (61914026) X 4 and take off the Front Base Ass'y (1AEAA240).

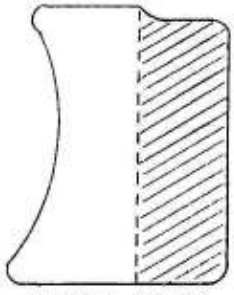
[Notes on Attaching of Leather]

The back of each Leather has been coated with adhesives. Before attaching the Leather (Left), Leather (Right) and Back Cover Leather, however, apply a thin film of bond (Ever Grip) to the specified edges of the adhesion surfaces of the Leathers.
Otherwise, the Leathers can easily come off.

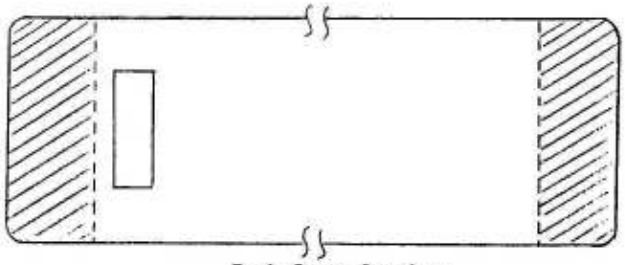
* Apply bond on the back surfaces of the following hatched areas:



Leather (Left)
(1AE18910)



Leather (Right)
(1AE18810)



Back Cover Leather
(1AE13300)

Fig.5

Removal of Main FPC Ass'y

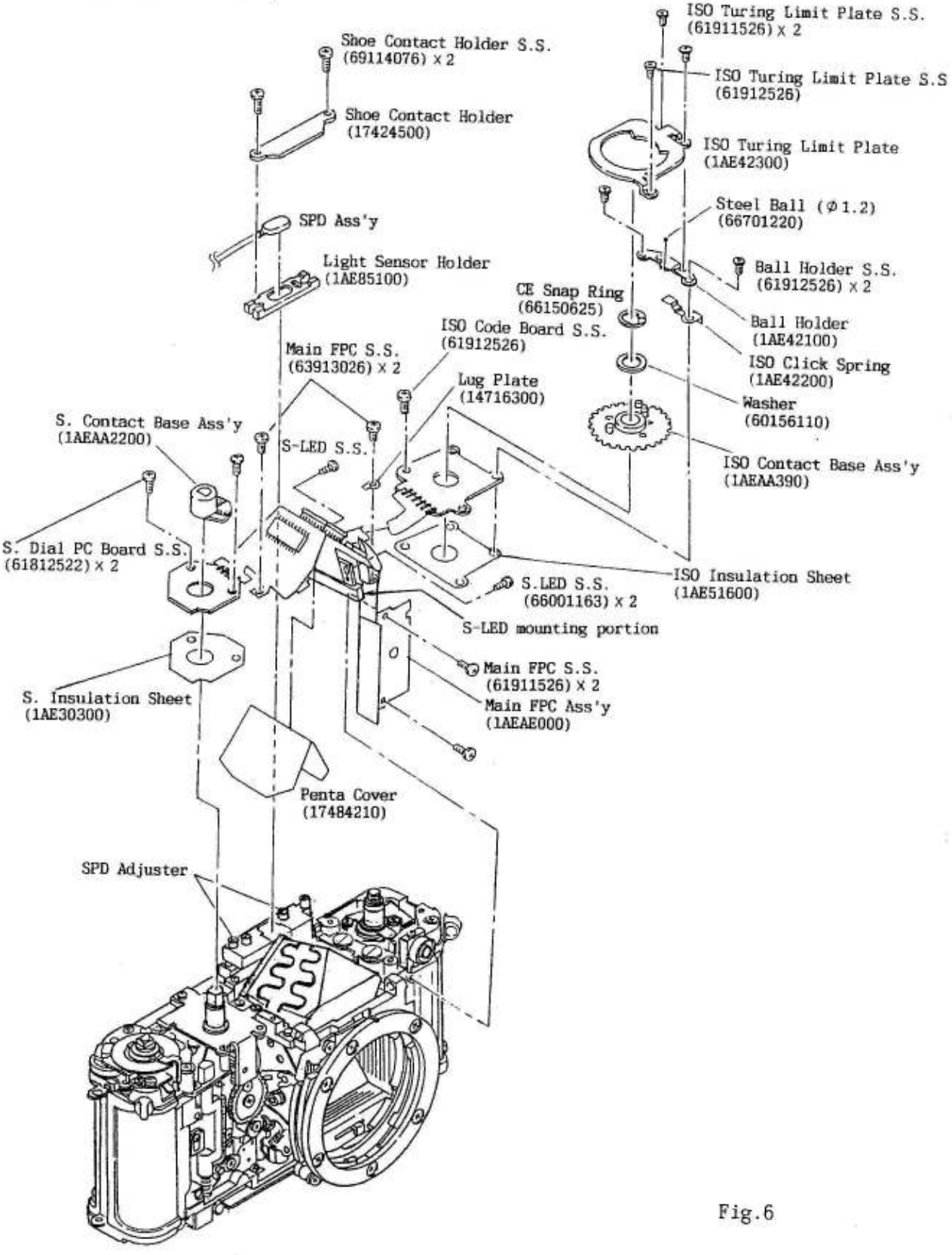


Fig.6

B-2 REMOVAL OF MAIN FPC ASS'Y

B-2-1 Removal of S.Dial PC Board

1) Remove the S. Contact Base Ass'y (1AEAA220).

   Note:

   a) Take care not to deform or damage the contact on the S. Contact Base.

2) Remove the S. Dial PC Board Setscrew (61812522) X 2.

3) Remove the S. Dial PC Board (1AE51500) and S. Insulation Sheet (1AE30300).

B-2-2 Removal of ISO Code Board

1) Remove the ISO Turning Limit Plate Aetscrews (61911526) X 2 and (61912526) and take off the ISO Turning Limit Plate (1AE42300).

2) Remove the CE Snap Ring (66150625) and take off the Washer (60156110) and ISO Contact Base Ass'y (1AEAA390).

   Note:

   a) Take care not to deform or damage the contact on the ISO Contact Base.

3) Remove the Ball Holder Setscrews (61912526) X 2 and take off the Ball Holder (1AE42100), ISO Click Spring (1AE42200) and Steel Ball (66701220) together.

4) Remove the ISO Code Board Setscrews (61912526) and take off the ISO Code Board.

B-2-3 Removal of Main FPC Ass'y

1) Unsolder the gray lead wire (coming from Synchro Socket).

2) Unsolder the green lead wire (coming from Shutter Unit).

3) Unsolder the brown and black lead wires (coming from Exposure Check Switch).

4) Unsolder the red and black lead wires (coming from Battery Box).

5) Unsolder the purple, yellow and blue lead wires (coming from AVR Ass'y)

6) Remove the Shoe Contact Holder Setscrews (69114076) X 2 and take off the Shoe Contact Holder (17424500), SPD Ass'y (1AEAE200) and Light Sensor Holder (1AE85100).

7) Remove the Main FPC Setscrews (61912226) X 2.

8) Remove the Main FPC Setscrews (63912520) X 2 and take off the Lug Plate (14716300).

9) Remove the S-LED Setscrews (66001163) X 2.

10) Remove the Main FPC Ass'y (1AEAE000).

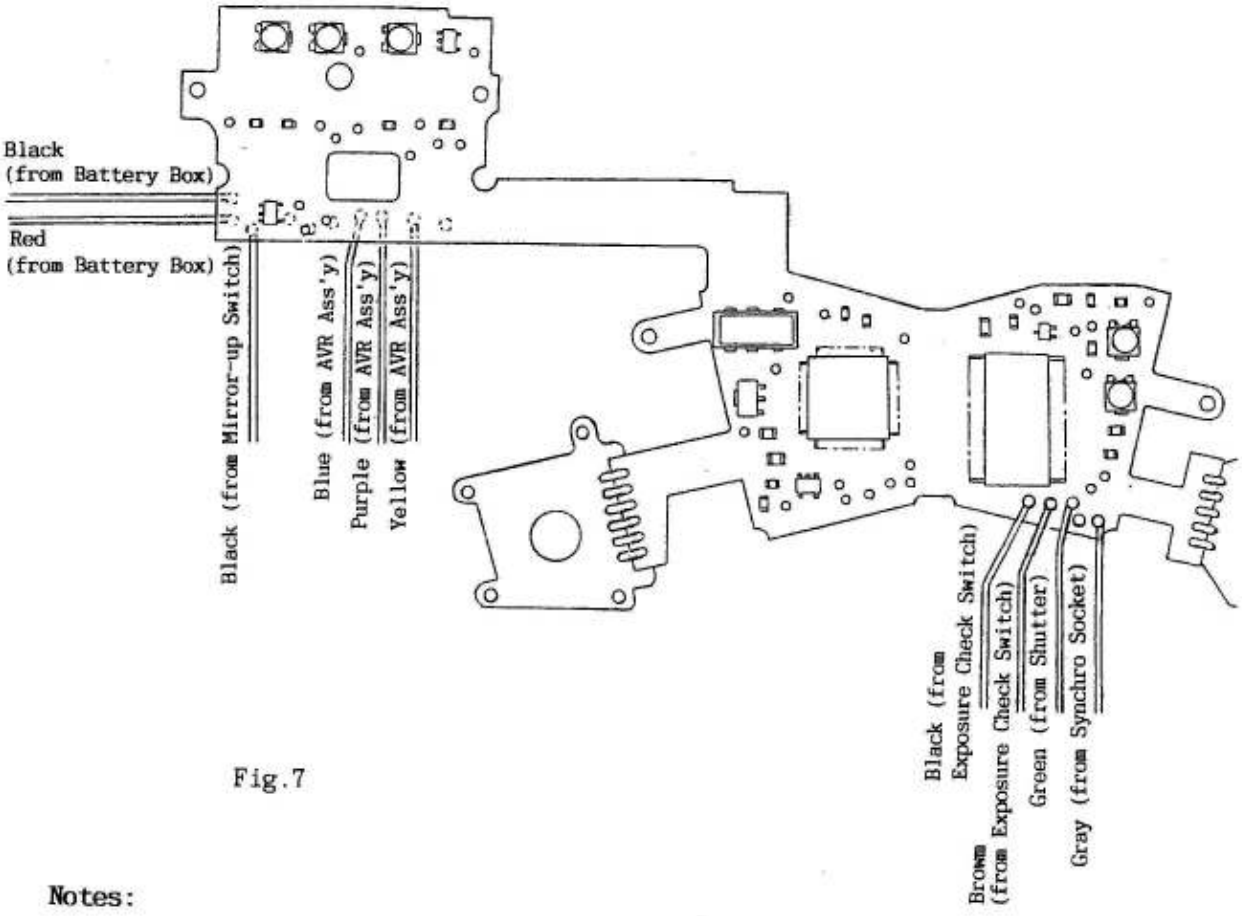


Fig.7

Notes:

a) The Lug Plate (14716300) will be disused in the course of production. (See page B-10)

b) When the S-LED Setscrews (66001163) X 2 have been removed and thus the S-LED mounting portion is moved, adjust the shutter speed indicator position in the viewfinder. (See page C-9)

c) Do not turn either of the two SPD Adjusters (pins for adjusting spot metering position). If the SPD Adjusters have been turned, make the adjustment of spot metering position. (See page C-8)

d) To remove the Main FPC Ass'y and Mirror Box Ass'y together, there is no need of removing the Main FPC Setscrews (63912520) X 2, S-LED Setscrews (66001163) X 2 and Shoe Contact Holder (17424500) or unsoldering the blue, yellow and brown lead wires coming from the AVR Ass'y.

[Charge of CPU]

* In the course of production, the CPU was changed, the pattern on the Main FPC was modified and the Auxiliary Board and Lug Plate were disused.

Old Main FPC Ass'y

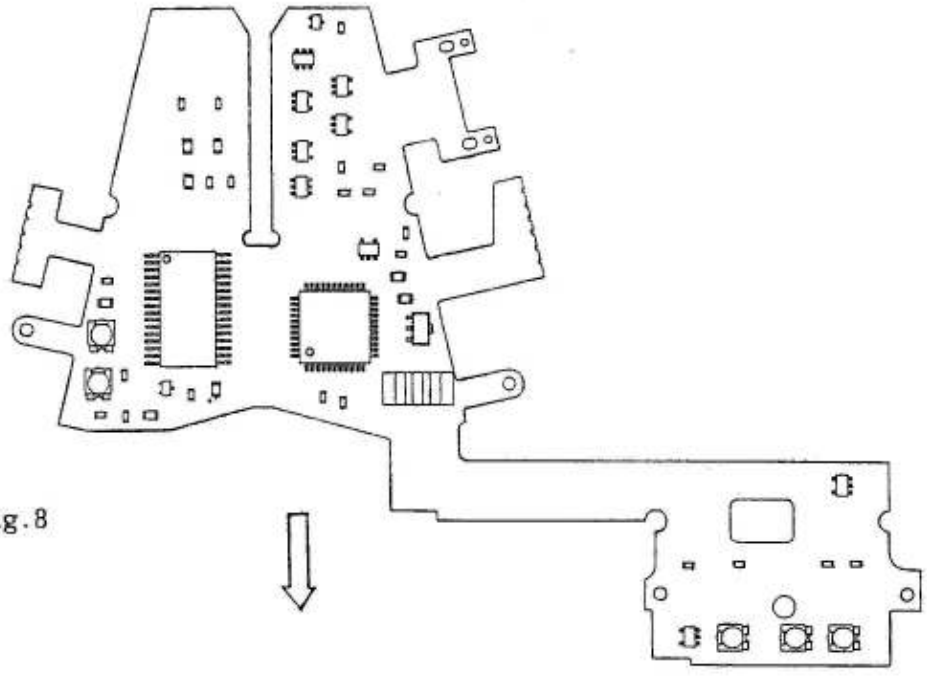


Fig.8

New Main FPC Ass'y

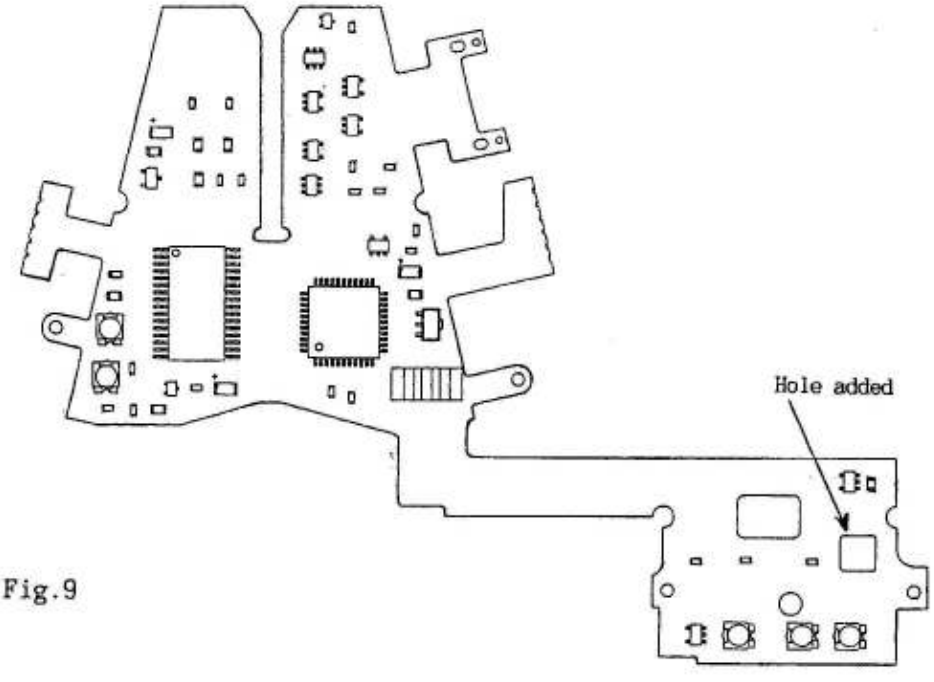
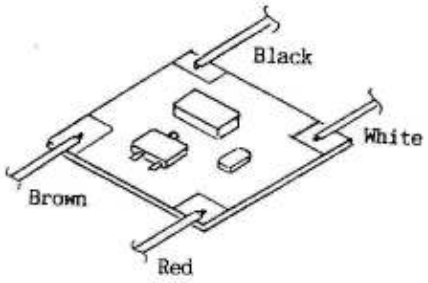


Fig.9

* The Auxiliary Board and Lug Plate (14716300) are not used with the new Main FPC Ass'y.



Auxiliary Board

Fig.10

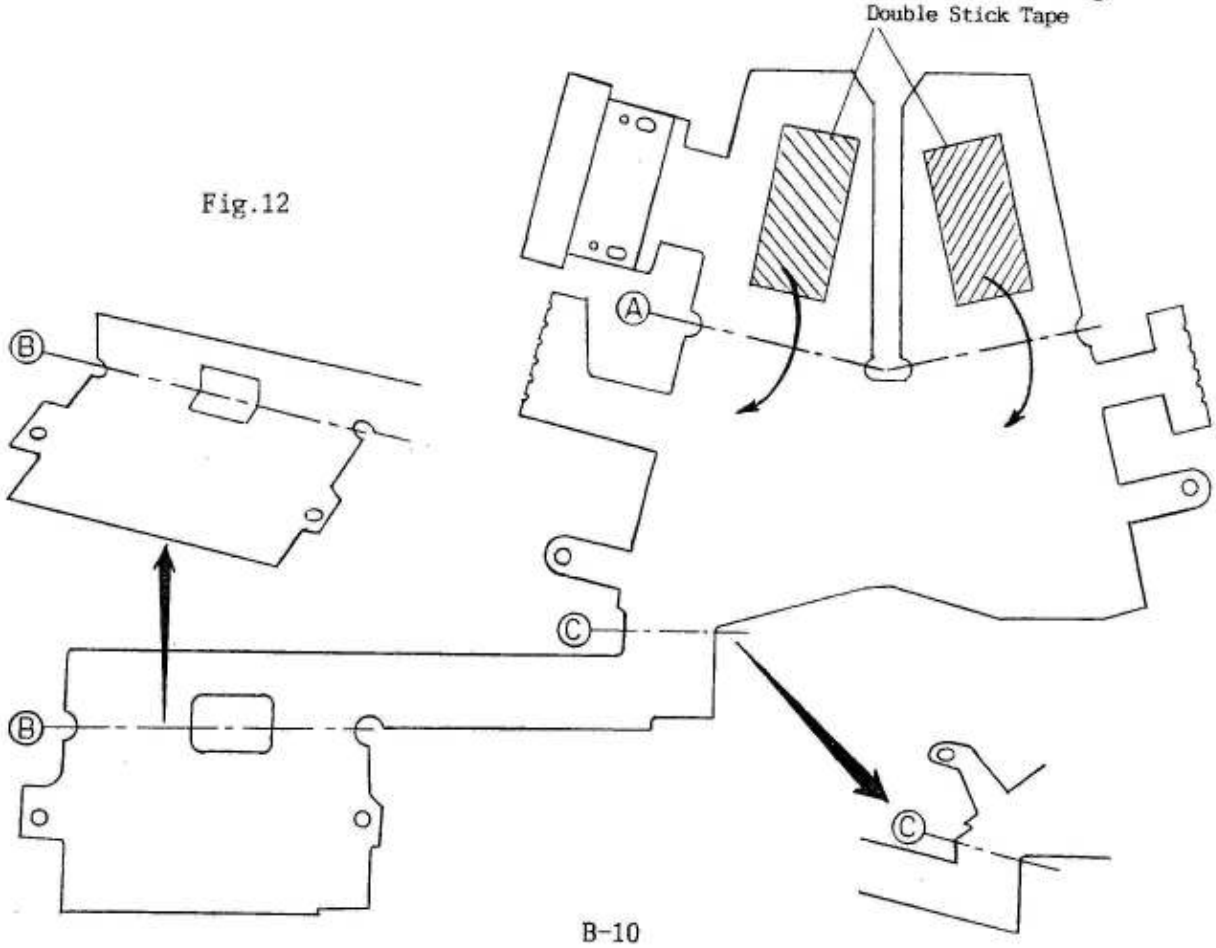
Lug Plate
(14716300)

Fig.11

[Forming of Main FPC]

Attach Double Stick Tape to the back of the Main FPC Ass'y, peel off the base sheet from the Double Stick Tape and fold the Main FPC along the line Ⓐ

Fig.12



Removal of Mirror Box Ass'y & Shutter unit

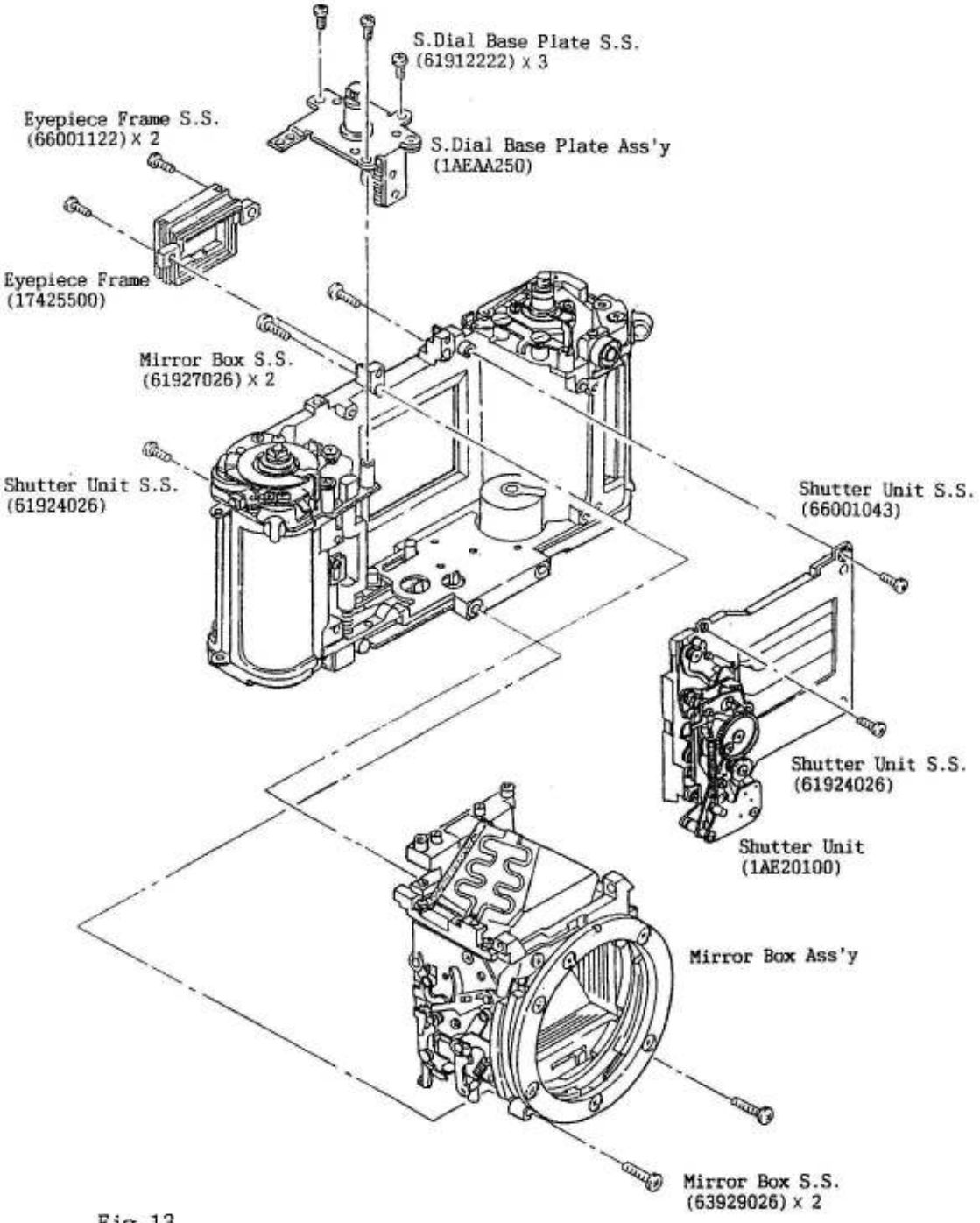


Fig.13

B-3 REMOVAL OF MIRROR BOX ASS'Y

B-3-1 Removal of S. Dial Base Plate Ass'y

1) Remove the S. Dial Base Plate Setscrews (61912526) X 3.

2) Remove the S. Dial Base Plate Ass'y (1AEAA250).

B-3-2 Removal of Mirror Box Ass'y

1) Remove the Eyepiece Frame Setscrews (66001122) X 2 and take off the Eyepice Frame (17425500).

2) Remove the Mirror Box Setscrews (63927026) X 2 and (63929026) X 2.

3) Remove the Mirror Box Ass'y (1AEAB010).

[Installation of S. Dial Base Plate Ass'y]

1) Set the Shutter Speed Setting Gear so that the screw Ⓑ of the Shutter is positioned just above the screw Ⓐ . (Bulb position)

2) With the D-cut surface of the shaft facing as shown in Fig.14, install the S. Dial Base Plate on the Body.

Notes:

a) In the early stage of production, a Wahser (60121820) was provisionally used under the S. Dial Base Plate Ass'y. The Washer is not used with the new S. Dial Base Plate, which is different from the old one in the position of the caulked hole for Idle Gear.

b) Tighten the screw ① while pushing the Base Plate in the direction of the arrow. Then tighten the screws ② and ③ in this order. This procedure is a provisional measure to prevent the Shutter Dial from being caught.

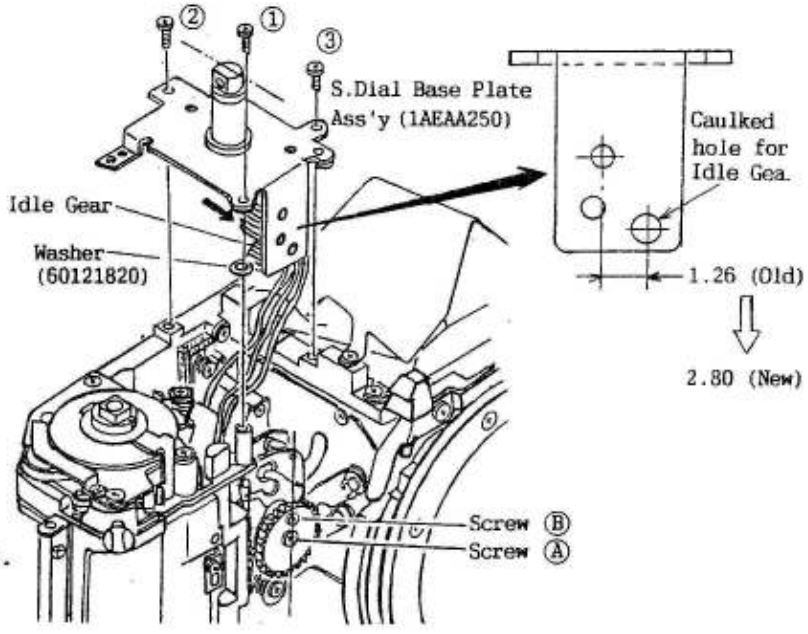


Fig.14

B-4 REMOVAL OF SHUTTER UNIT

B-4-1 Removal of Shutter Unit

1) Remove the Shutter Unit Setscrews (61924026) x 2 and (66001043).

2) Remove the Shutter Unit (1AE20100).

Note:

a) One of the Shutter Unit Setscrews (61924026) is located under the Body Shield (Lower). Remove the Shutter Unit Setscrew with care not break the Body Shield (Lower).

[Installation of Body Shielding Moquettes]

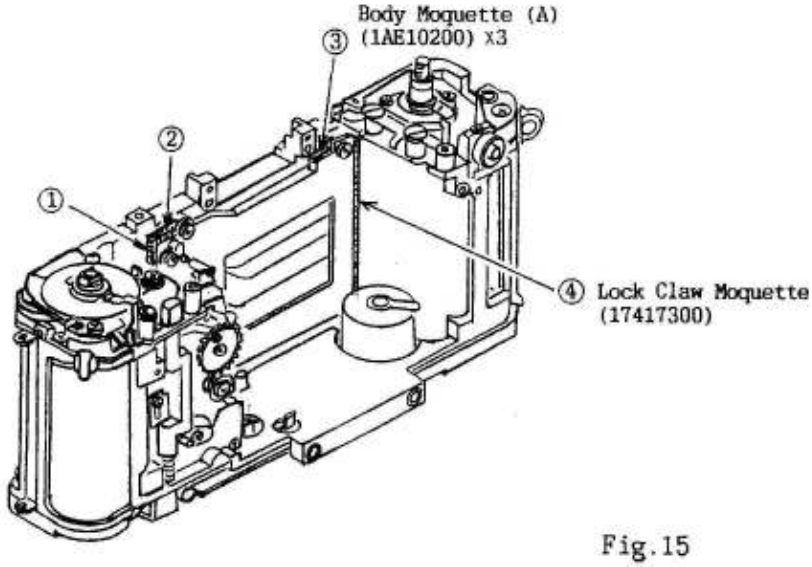


Fig.15

[How to Attach]

Attach the Body Moquette (A) ③ to the Shutter unit.

Attach the Body Moquettes (A) ① and ③ to the Body.

Attach the Lock Claw Moquette ⑤ to the Body.

[Change of Body]

a) In the early stage of production, Washer (12866600) or (60652110) was attached in four positions on the back of the Mirror Box provisionally. Afterward, however, the Body was changed in shape and the Washer was disused.

b) In the early stage of production, the Shutter Unit Setscrew (61824526), a flat head screw, was used. Afterward, however, the Shutter Unit Setscrew was replaced with a pan head screw (61924056) because of the change of the hole diameter in the Body.
Yet, the flat head screw (61824526) can be used with the new Body.

c) Tighten the Shutter Unit Setscrews in the order of ① (flat head screw), ② (Ni screw) and ③ (B. Zn screw).

d) The new Body is marked with two or three indentations as shown in Fig.16.

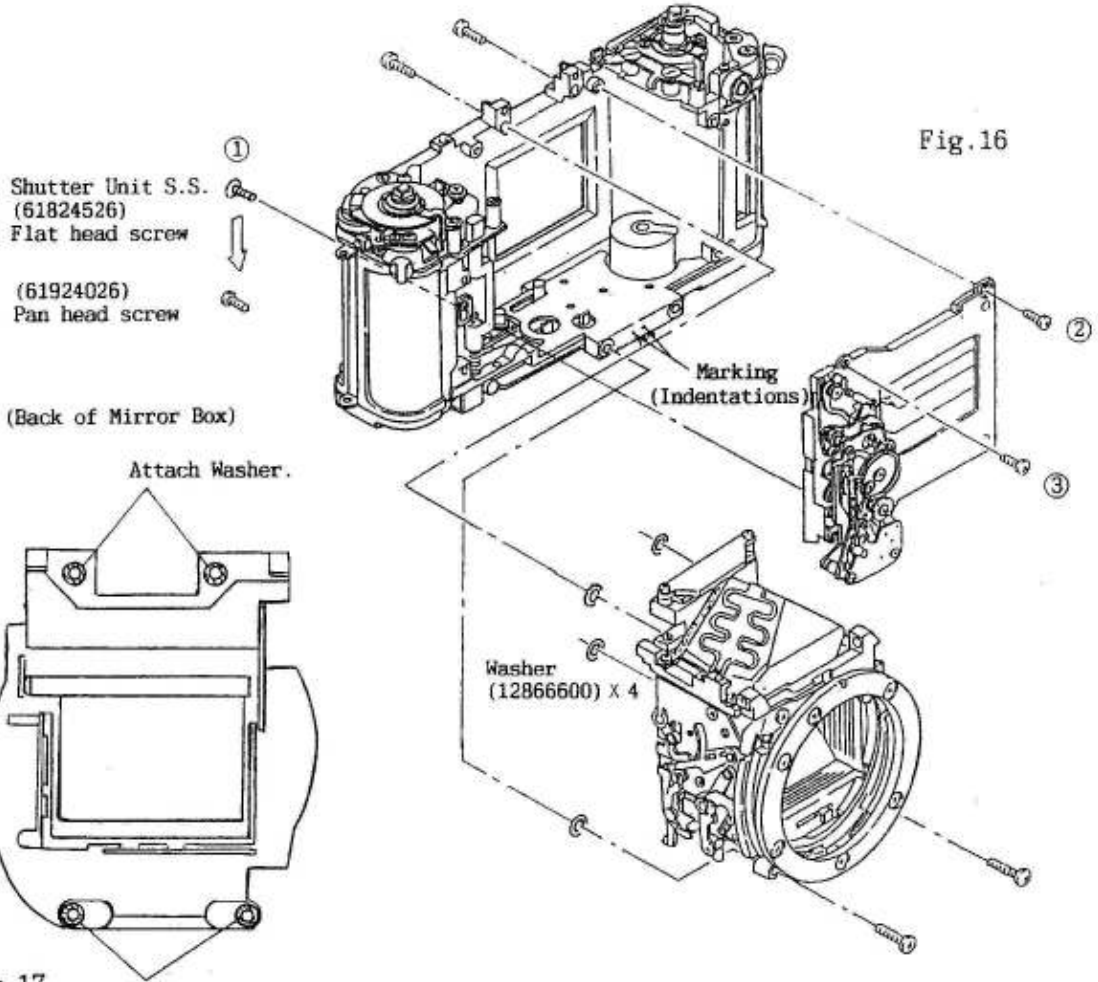


Fig.16

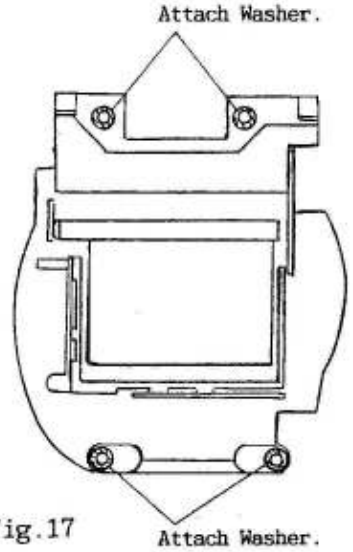


Fig.17

Disassembly of Winding Mechanism (Upper side of Body)

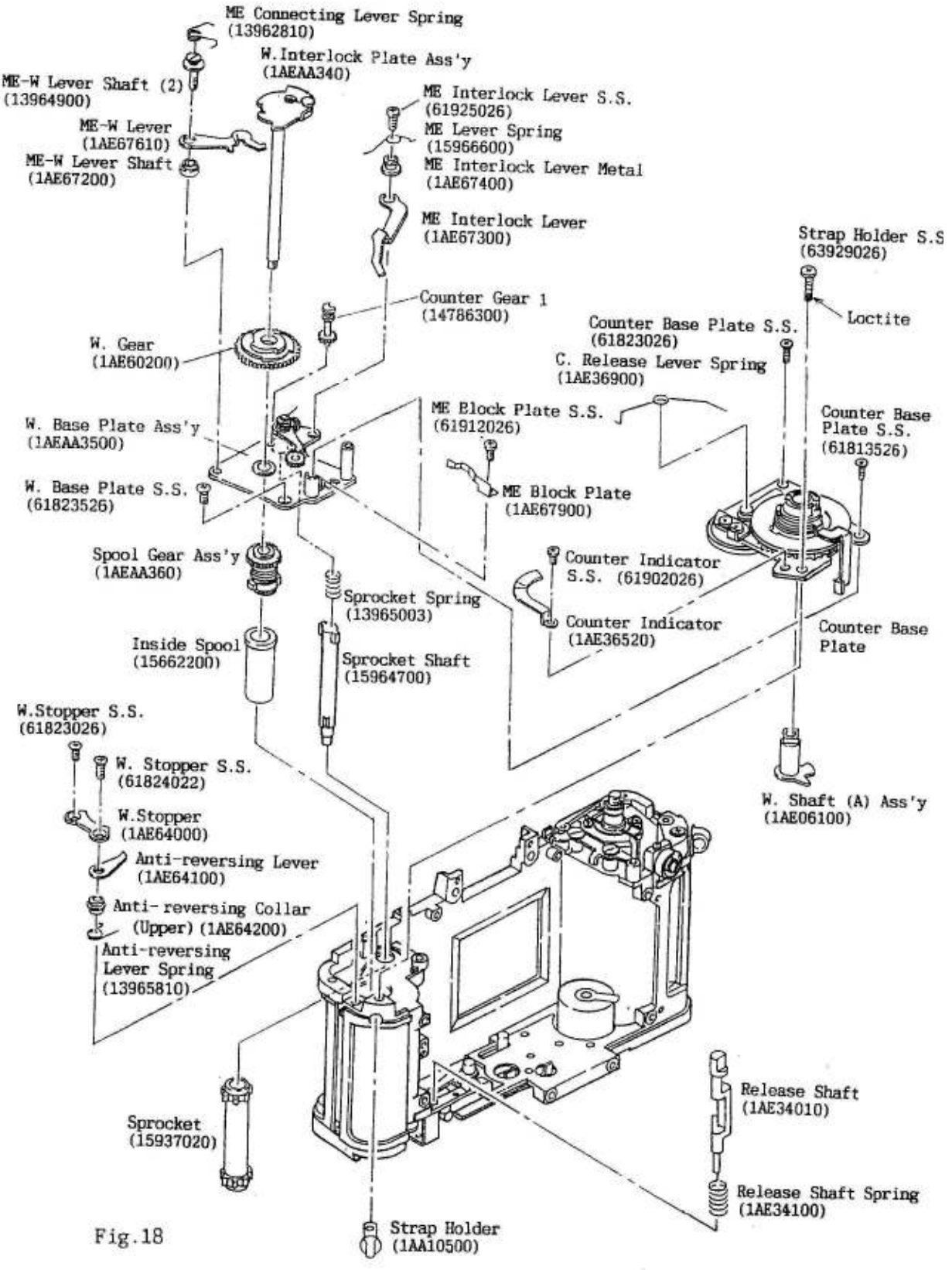


Fig.18

B-5 DISASSEMBLY OF WINDING MECHANISM

B-5-1 Removal of Counter Base Plate Ass'y

1) Remove the Counter Indicator Setscrew (61911526) and take off the Counter Indicator (1AE36520).

2) Remove the C. Release Lever Spring (1AE36900).

3) Remove the Strap Holder Setscrew (62919026) and take off the Strap Holder (1AA10510).

4) Remove the Counter Base Plate Setscrews (61823026) X 2 and take off the Counter Base Plate Ass'y.

5) Remove the W. Shaft (A) Ass'y (1AE06100).

6) Remove the Counter Gear (1) (14786300).

B-5-2 Disassembly of Winding Mechanism

(Upper Side of Body)

1) Remove the ME Block Plate Setscrew (61912026) and take off the ME Block Plate (1AE67900).

2) Remove the ME Interlock Lever Setscrew (61925026) and take off the ME Lever Spring (15966600), ME Interlock Lever Metal (1AE67400) and ME Interlock Lever (1AE67300).

3) Remove the ME Connecting Lever Spring (13962800).
Remove the ME-W Lever (1AE67610) and ME-W Lever Shaft (1AE67200) by taking out the ME-W Lever Shaft (2) (13964900).

(Lower Side of Body)

4) Remove the SR Lock Lever Retainer Setscrew (61914026) and take off the SR Lock Lever Retainer (1AE22300).

5) Remove the SR Lever (3) Shaft Screw (14743700) and take off the Winding Stopper Lever Spring (14761400).

6) Remove the Winding Stopper Lever Setscrew (61913026) and take off the Winding Stopper Lever Ass'y (1AEAA280).

7) Remove the E Ring (E-12) (66001225) and SR Lever Ass'y Setscrew (61912026) and take off the SR Lever Ass'y (1AEAA310).

8) Remove the SR Lever (3) Shaft Screw (1473700) and take off the SR Lever (3) Ass'y (1AEAA300).

9) Remove the SR Lever (3) Shaft Screw (14743700) and take off the SR Lock Lever (14743900) and SR Lock Spring (14744000).

Disassembly of Winding Mechanism (Lower Side of Body)

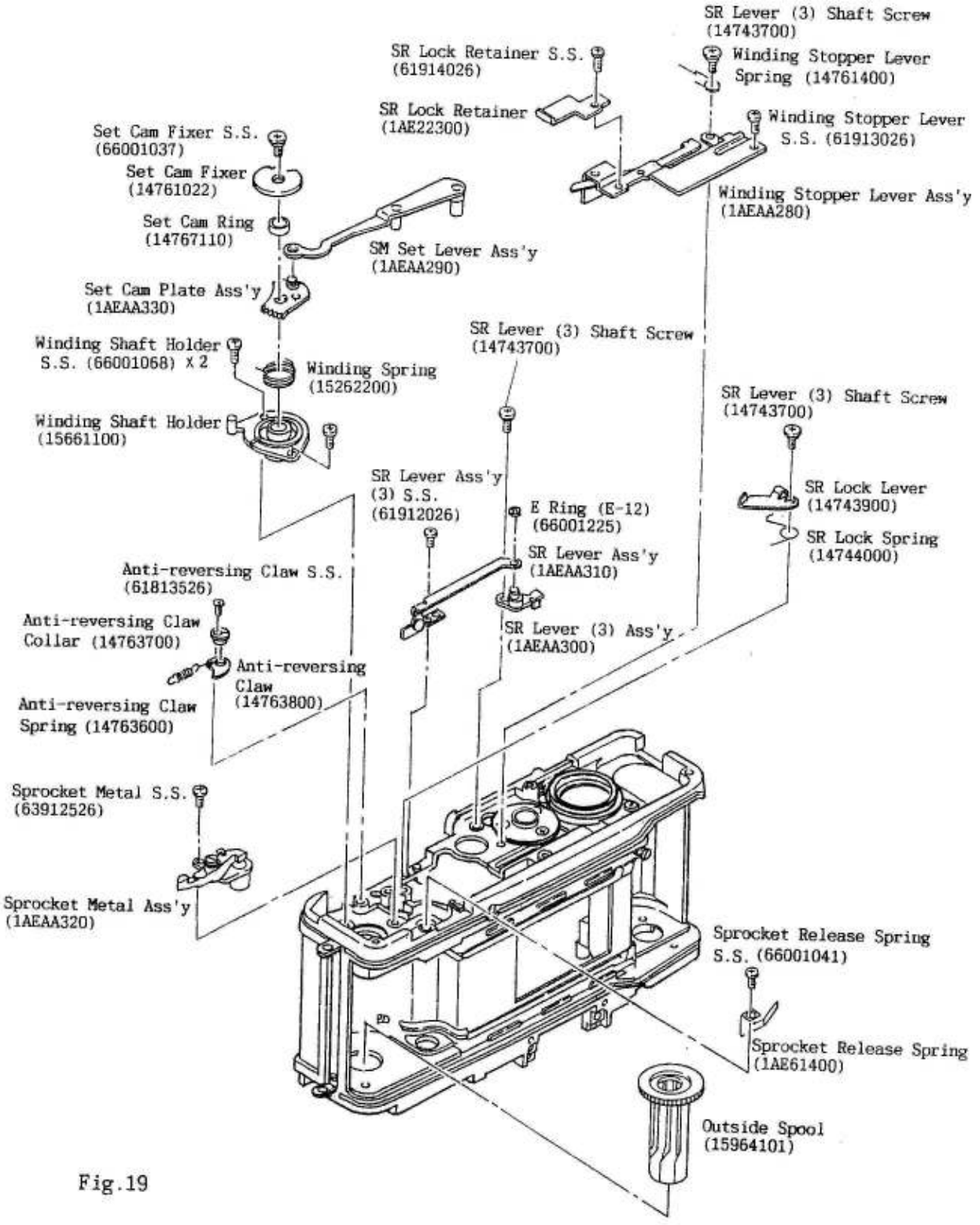

SR Lever (3) Shaft Screw (14743700)
SR Lock Retainer S.S. (61914026)
Winding Stopper Lever Spring (14761400)
SR Lock Retainer (1AE22300)
Winding Stopper Lever S.S. (61913026)
Set Cam Fixer S.S. (66001037)
Set Cam Fixer (14761022)
Winding Stopper Lever Ass'y (1AEAA280)
Set Cam Ring (14767110)
SM Set Lever Ass'y (1AEAA290)
Set Cam Plate Ass'y (1AEAA330)
SR Lever (3) Shaft Screw (14743700)
Winding Shaft Holder S.S. (66001068) x 2
Winding Spring (15262200)
SR Lever (3) Shaft Screw (14743700)
Winding Shaft Holder (15661100)
SR Lever Ass'y (3) S.S. (61912026)
E Ring (E-12) (66001225)
SR Lock Lever (14743900)
SR Lock Spring (14744000)
SR Lever Ass'y (1AEAA310)
Anti-reversing Claw S.S. (61813526)
Anti-reversing Claw Collar (14763700)
SR Lever (3) Ass'y (1AEAA300)
Anti-reversing Claw (14763800)
Anti-reversing Claw Spring (14763600)
Sprocket Metal S.S. (63912526)
Sprocket Metal Ass'y (1AEAA320)
Sprocket Release Spring S.S. (66001041)
Sprocket Release Spring (1AE61400)
Outside Spool (15964101)

Fig.19

(Upper Side of Body)

10) Remove the W. Stopper Setscrews (61823026) and (61824022) and take off the W. Stopper (1AE64000), Anti-reversing Lever (1AE64100), Anti-reversing Collar (Upper) (1AE64200) and Anti- reversing lever Spring (1395810).

(Lower Side of Body)

11) Remove the Anti-reversing Claw Spring (14763600).

12) Remove the Anti-reversing Claw Setscrew (61813526) and take off the Anti-reversing Claw Collar (14763700) and Anti-reversing Claw (14763800).

13) Remove the Set Cam Fixer Setscrew (66001037) and take off the Set Cam Fixer (14761022), Set Cam Ring (14767110) and SM Set Lever Ass'y (1AEAA290).

Notes:

a) The Set Cam Fixer Setscrew (66001037) is a reverse screw.

b) Since the Set Cam Fixer Setscrew is locked with Loctite, take due care when removing it.

14) Remove the Sprocket Release Spring Setscrew (61912526) and take off the Sprocket Release Spring (1AE61400).

15) Remove the Sprocket Metal Setscrew (63912522) and take off the Sprocket Matal Ass'y (1AEAA320).

16) Remove the Set Cam Plate Ass'y (1AEAA330) and Winding Spring (15262200).

Note:

a) The Set Cam Plate Ass'y (1AEAA330) has been press-fitted on the W. Shaft (B).

(Upper Side of Body)

17) Remove the W. Interlock Plate Ass'y (1AEAA340) and W. Gear (1AE60200).

18) Remove the W. Base Plate Setscrew (61823526) and take off the W,Base Plate Ass'y (1AEAA350).

19) Remove the Sprocket Spring (13965003), Release Shaft Spring (1AE34100) and Release Shaft (1AE34010).

20) Remove the Sprocket Shaft (15963700) and Sprocket (15937020).

21) Remove the Spool Gear Ass'y (1AEAA360) and Inside Spool (15662200).

(Lower Side of Body)

22) Remove the Winding Shaft Holder Setscrews (66001068) X 2 and take off the Winding Shaft Holder (15661100) and Outside Spool (15964001).

[Reassembly Procedure for Winding Mechanism]

(Lower Side of Body)

1) Install the Outside Spool (15964101) in the Body.

2) Apply grease HK-9 to the Winding Shaft Holder (15661100), install it on the Body and secure it with the Winding Shaft Holder Setscrews (66001068) x 2.

Fig.20

(Upper Side of Body)

3) Install the Inside Spool (15662200) and Spool Gear Ass'y (1AEAA360) in the Outside Spool.

4) With the internal groove of the Sprocket (15937020) up and the mark of the Sprocket Shaft (15964700) toward the film rail surface, drop the Sprocket Shaft into the Sprocket by fitting the Shaft in the groove of the Sprocket. Then install the Sprocket in the Body.

5) Through the hole in the Body, install the Sprocket Spring (13965003) on the Sprocket.

6) Set the W. Base Plate Ass'y (1AEAA350) so that the marking-off line of Idle Gear (A) points to the center of the W. Metal when the slot of the Sprocket Gear faces the film rail surface of the Body.

7) Install the W. Base Plate Ass'y prepared in 6) on the Body and tighten the W. Base Plate Setscrew hand-tight.

Note:

When installing the W. Base Plate Ass'y on the Body, take care not to change the position of the Sprocket.

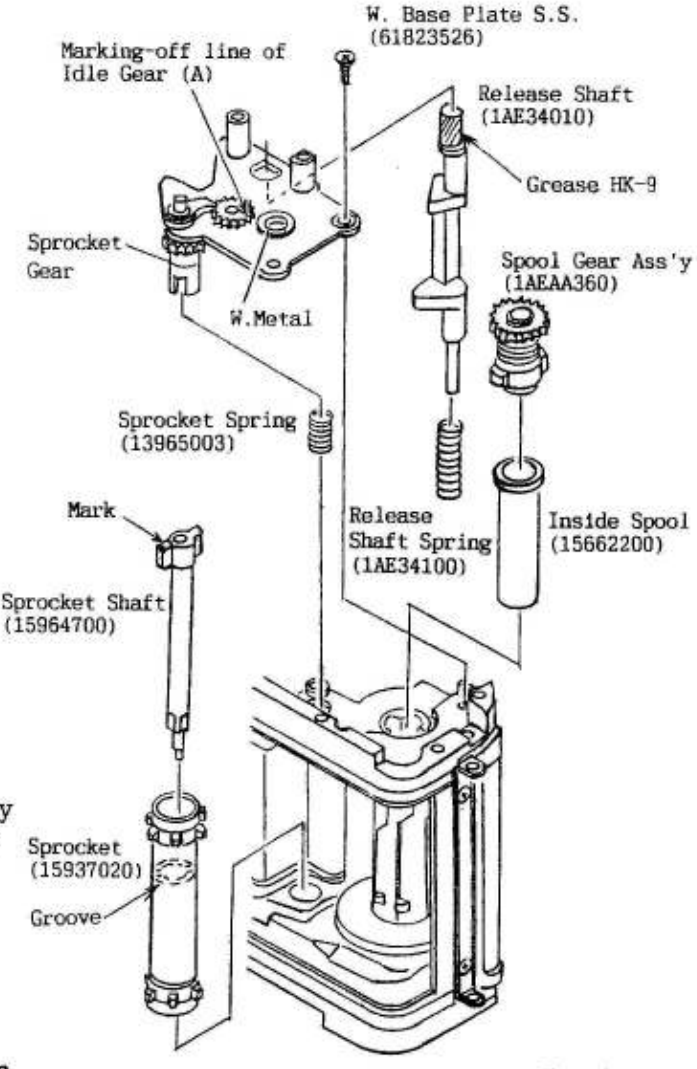


Fig.21

8) Put the Release Shaft Spring (1AE34100) on the Release Shaft (1AE34010) and install them on the Body while lifting up the W. Base Plate Ass'y. Tighten up the W. Base Plate Setscrew.

9) Engage the Idle Gear (A) on the W. Base Plate with the W. Gear (1AE60200) so that the marking-off line is positioned at the center-punched mark (•).

10) Install the W. Interlock Plate Ass'y (1AEAA340) in the position as shown by the arrow.

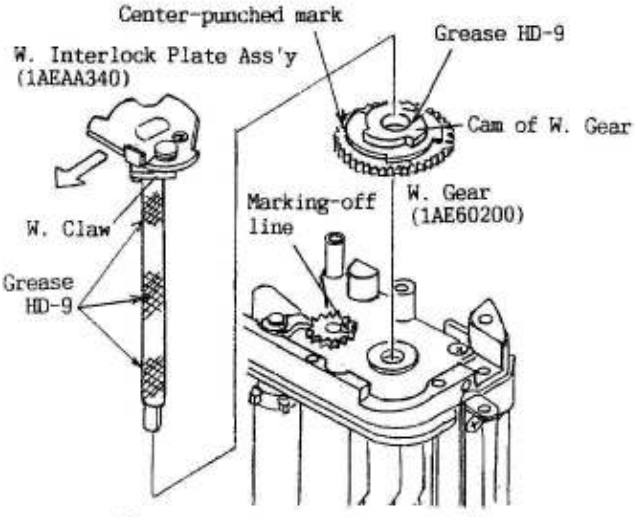


Fig.22

Notes:

a) When installing the W. Interlock Plate Ass'y, take care that the engagement between the W. Gear and the Idle Gear (A) does not change.

b) Take care that the W. Claw of the W. Interlock Plate Ass'y is not positioned on the cam of the W. Gear.

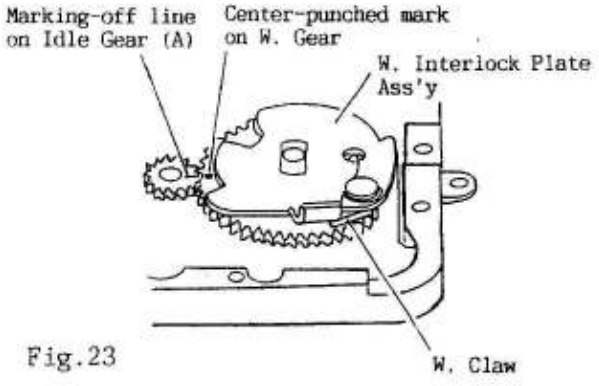


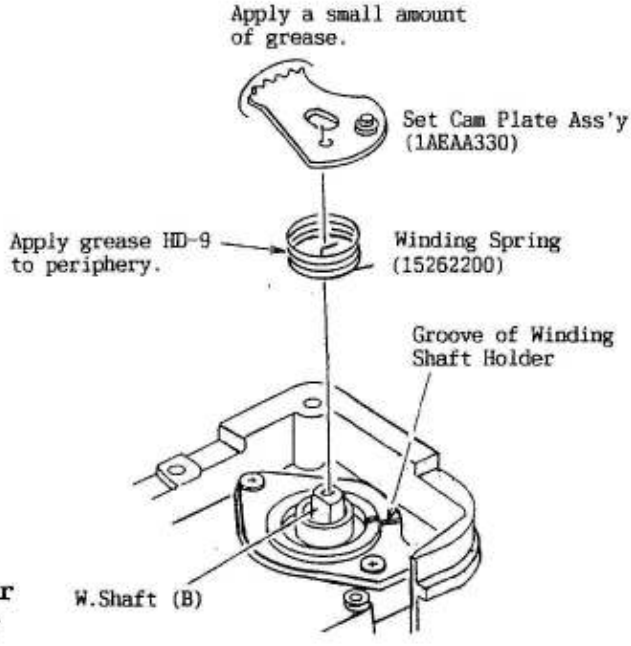
Fig.23

(Lower Side of Body)

11) Install the Winding Spring (15262200) by fitting it in the groove of the Winding Shaft Holder.

12) In the position as shown in Fig.24, fit the Set Cam Plate Ass'y (1AEAA330) gently on the W.Shaft (B).

13) With the end of the Winding Spring inserted in the hole of the Set Cam Plate Ass'y, press in the Set Cam Plate Ass'y.


Apply a small amount of grease.
Set Cam Plate Ass'y (1AEAA330)
Apply grease HD-9 to periphery.
Winding Spring (15262200)
Groove of Winding Shaft Holder
W.Shaft (B)
Fig.24

Notes:

a) When installing the Set Cam Plate Ass'y, take care that the engagement between the W. Gear and the Idle Gear (A) on the upper side of the Body does not change. Also take care that the W. Claw is

not caught between the cam of W. Gear. (See Fig.22)

b) Be sure to the push the Set Cam Plate Ass'y down to the root of the W. Shaft (B) completely.

14) Install the Sprocket Metal Ass'y (1AEAA320) and tighten the Sprocket Metal Setscrew (63912522).

15) Install the Sprocket Release Spring (1AE61400) and tighten the Sprocket Release Spring Setscrew (61912526).

16) Set the QR Stop Lever Spring (15967700) as shown in Fig.25.
Lock the QR Stop Lever Spring with bond (C-551).

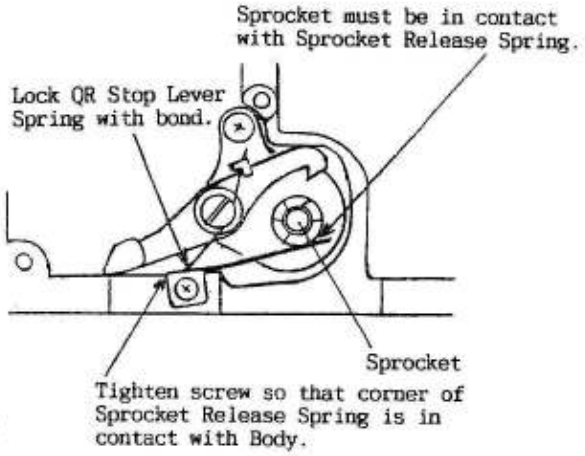

Sprocket must be in contact with Sprocket Release Spring.
Lock QR Stop Lever Spring with bond.
Sprocket
Tighten screw so that corner of Sprocket Release Spring is in contact with Body.

Fig.25

Notes:

a) Secure the Sprocket Release Spring so that its corner is in contact with the Body.

b) The Sprocket must be in contact with the Sprocket Release Spring.

17) Install the SM Set Lever Ass'y (1AEAA290).

18) Install the Set Cam Ring (14767110) and Set Cam Fixer (14761022) and tighten the Set Cam Fixer Setscrew (66001037) (reverse screw).

19) Hook the Anti-reversing Claw Spring (14763600) to the Anti-reversing Claw (14763800), install the Anti-reversing Claw and Anti-reversing Claw Collar (14763700) on the Body and tighten them with Anti-reversing Claw Setscrew (61813526).

20) Hook the end of the Anti-reversing Claw Spring to the pin on the Winding Shaft Holder and lock it with bond (C-551).

(Upper Side of Body)

21) Fix the W. Stopper (1AE64000) with the W. Stopper Setscrew (61823026) provisionally in a position where it does not come in contact with the W. Interlock Plate Ass'y.

22) Turn the W. Interlock Plate Ass'y in the direction of the arrow (counterclockwise) by about 180 degrees, move the W. Stopper to the normal position and stop turning the W. Interlock Plate Ass'y.

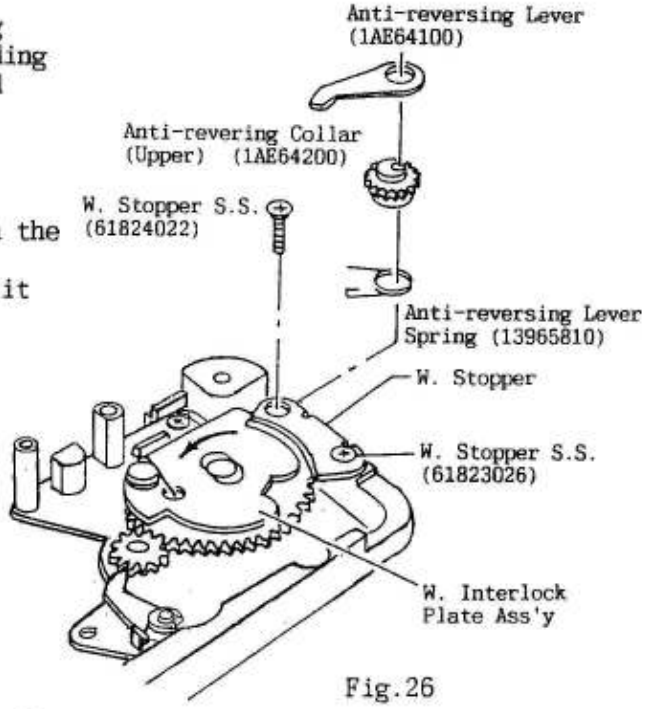


Fig.26

23) Combine the Anti-reversing Lever Spring (13965810), Anti-reversing Collar (Upper) (1AE64200) and Anti-reversing Lever (1AE64100), insert them between the W. Stopper and the Body and fix them with the W. Stopper Setscrew (61824022) hand-tight.

24) Set the Anti-reversing Lever Spring as shown in the Fig.27.

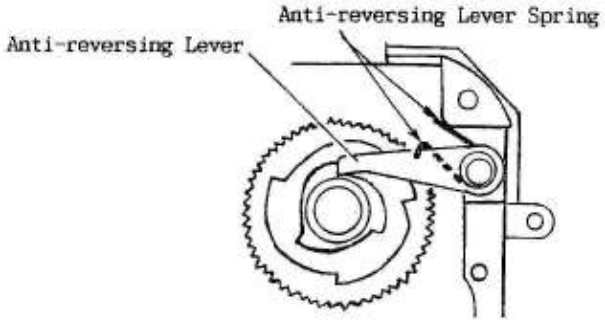


Fig.27

(Lower Side of Body)

25) Put the SR Lock Spring (1474400) and SR Lock Lever (14743900) together and tighten them with the SR Lever (3) Shaft Screw (14743700).

26) Set the SR Lock Spring as shown in Fig.28.

27) Install the SR Lever (3) Ass'y (1AEAA300) and tighten it with the SR Lever (3) Shaft Screw (14743700).

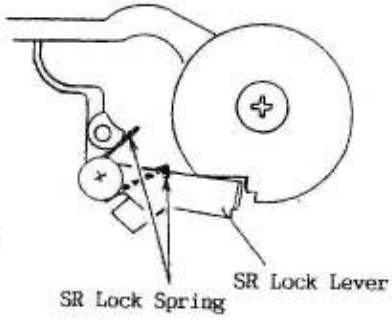


Fig.28

28) Install the SR Lever Ass'y (1AEAA310) and tighten it with the SR Lever Ass'y Setscrew (61912026).

29) Insert the post of the SR Lever (3) in the hole of the SR Lever Ass'y and install the E Ring (E-12) (66001225).

30) Install the Winding Stopper Lever Ass'y (1AEAA280) and tighten it with the Winding Stopper Lever Setscrew (61913026).

31) Pase the SR Lever (3) Shaft Screw (14743700) through the Winding Stopper Lever Spring (14761400) and tighten it.

32) Set the Winding Stopper Lever Spring as shown in Fig.29.

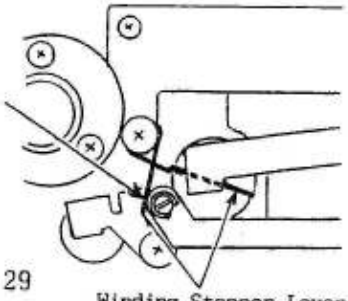


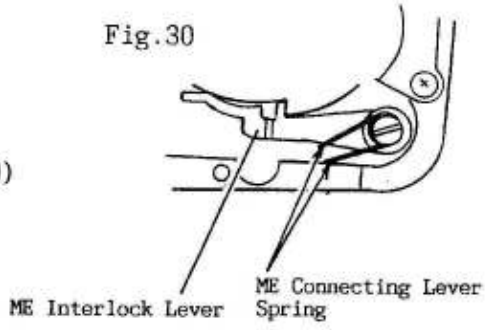
Fig.29

33) Install the SR Lock Lever Retainer (1AE22300) and tighten the Winding Stopper Lever Setscrew (61914026).

(Upper Side of Body)

34) Install the ME-W Lever Shaft (1AE67200) and ME-W Lever (1AE67610) and tighten them with the ME-W Lever Shaft (2) (13964900). Then install the ME Connecting Lever Spring (13962810).

Fig.30



35) Set the ME Connecting Lever Spring as shown in Fig.30.

36) Install the ME Interlock Lever (1AE67300), ME Interlock Lever Metal (1AE67400) and ME Lever Spring (15966600) and tighten them with the ME Interlock Lever Setscrew (61925026).

37) Set the ME Lever Spring as shown in Fig.31.

38) Set the Idle Claw Spring as shown in Fig.31 and lock the body-side end of the Idle Gear Claw Spring with bond (C-551).

39) Install the ME Block Plate (1AE67900) and tighten the ME Block Plate Setscrew (61912026).

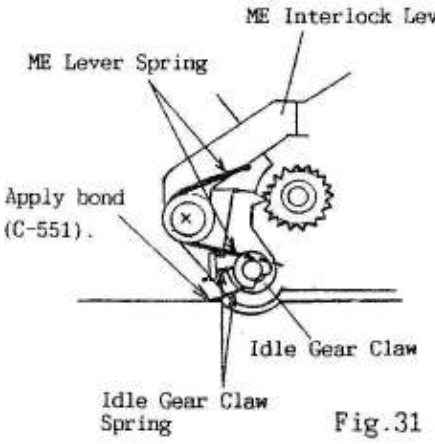


Fig.31

[Installation of Counter Base Plate Ass'y]

1) Insert the toothed portion of the Counter Gear (1) (14786300) under the ME-W Lever and engage it with the W. Gear.

Note:

a) **Install the Counter Gear (1) with its notch positioned on the opposite side of the W. Shaft. (Fig.33)**

2) Put the surface Ⓐ of the W. Shaft (A) Ass'y (1AE06100) upon the surface Ⓑ of the W. Interlock Plate. Interlock Plate and place the Counter Base Plate Ass'y on them. In doing so, push the C. Release Lever in the direction of the Counter Shaft and pass the Counter Gear (1) through the slot.

3) Tighten the Counter Base Plate Setscrews (61823026) and (61813526).

4) With the larger chamfer of the screw hole up, install the Strap Holder (1AA10500) on the body and tighten it with the Strap Holder Setscrew (63929026).

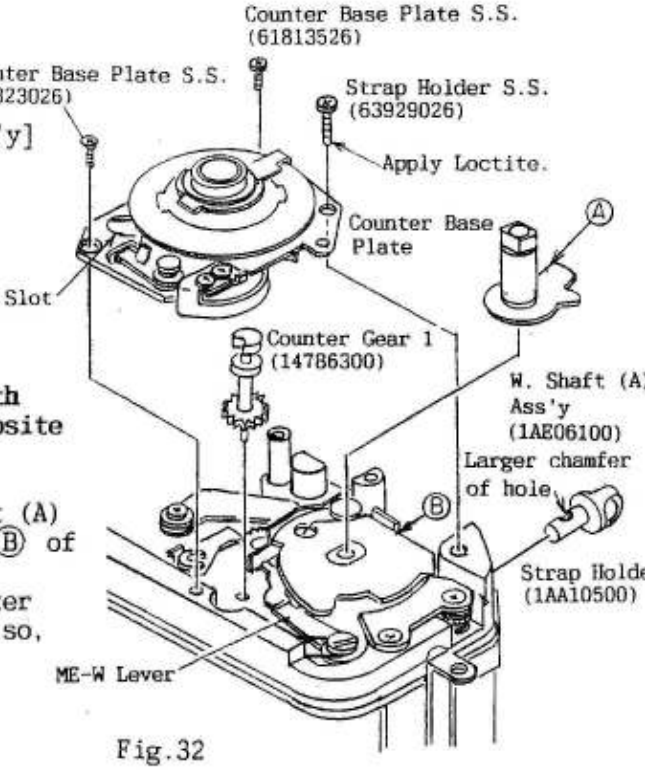


Fig.32

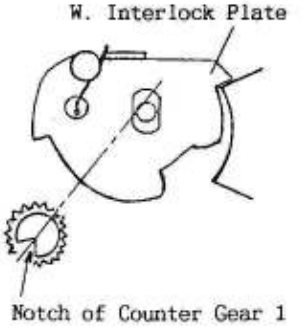


Fig.33

5) Install the C. Release Lever Spring (1AE36900) and set it. (See Fig.34)

6) Install the Counter Indicator (1AE36520) and tighten the Counter Indicator Setscrew (61902026).

7) Apply bond (C-551) to the head of the Counter Indicator Setscrew.

Note:

a) Install the Counter Indicator so that it is in parallel with the side of the Body and the triangle mark points to the "S" on the Counter Name Plate.

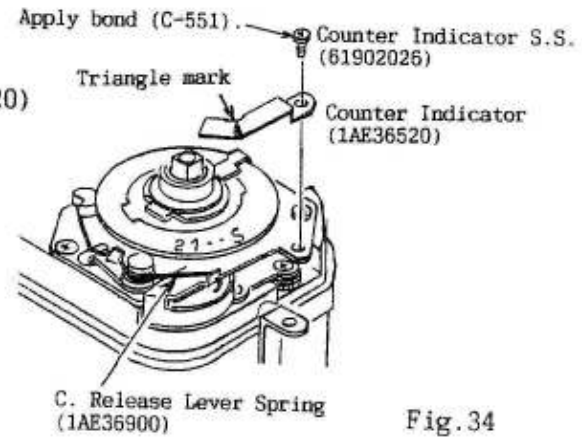


Fig.34

[Reassembly of Counter Base Plate]

1) Apply bond (C-551) to the Counter Gear (2) (1AE36310).

2) Attach the Counter Name Plate (15989200).

3) Install the W. Hanger Spring (1AE63730) on the Counter Base Plate (K) Ass'y (1AEAA450) and tighten it with the W. Hanger Spring Setscrews (61902026) X 2.

4) Hook one end of the Counter Spring (1AE36620) to the Counter Base Plate (K) Ass'y.

5) Hook the other end of the Counter Spring to Counter Gear (2).

6) Install the Counter Name Plate W/Counter Gear (2) and turn the Counter Gear (2) counterclockwise unitil it is stopped. Then lift up the Counter Gear (2) slightly with your hand and turn it counterclockwise. When the Counter Gear (2) has passed the stopper on the Counter Base Plate (K), put the Counter Gear (2) down.

7) Install the ME Coupling Ring (1AE66710) and ME Coupling Lever (1AE67800) and tighten the F. Cover Retaining Nut (1AE63800).

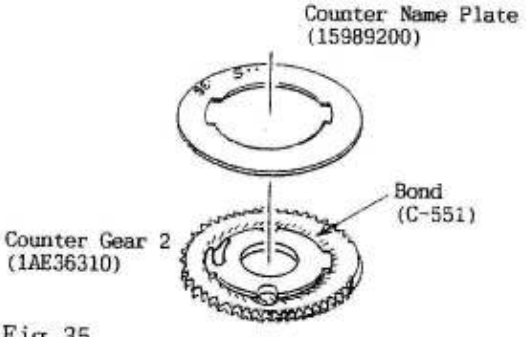


Fig.35

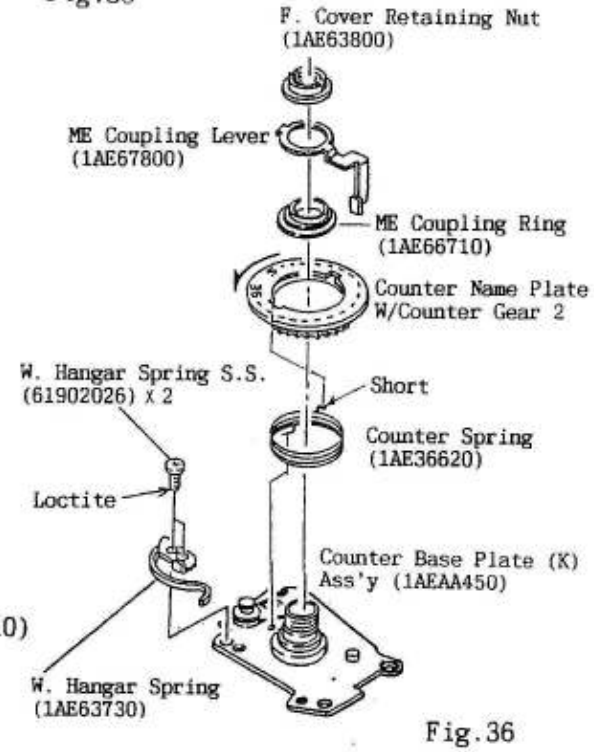

F. Cover Retaining Nut (1AE63800)
ME Coupling Lever (1AE67800)
ME Coupling Ring (1AE66710)
Counter Name Plate W/Counter Gear 2
W. Hangar Spring S.S. (61902026) X 2
Short
Counter Spring (1AE36620)
Loctite
Counter Base Plate (K) Ass'y (1AEAA450)
W. Hangar Spring (1AE63730)

Fig.36

B-6 DISASSEMBLY OF MIRROR BOX ASS'Y

B-6-1 Removal of Viewfinder Parts

1) Remove the Eyepiece Holder Ass'y Setscrews (61914026) X 2 and take off the Eyepiece Holder Ass'y (1AEAB160).

2) Remove the Penta Prism Holder Setscrews (63913526) X 4 and take off the Penta Prism Ass'y (1AEAB150).

3) Remove the four Focus Adjustment Washers.

Note:

a) In reassembly, install the removed four Focus Adjustment Washers. If finder fucusing is found faulty, replace the Focus Adjustment Washers with new ones and make the adjustment of finder focusing.

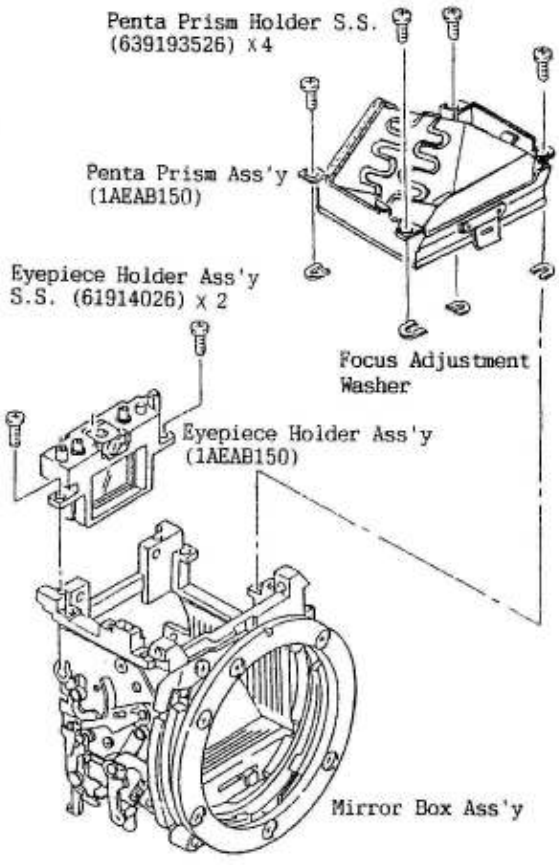

Penta Prism Holder S.S. (639193526) X 4
Penta Prism Ass'y (1AEAB150)
Eyepiece Holder Ass'y S.S. (61914026) X 2
Focus Adjustment Washer
Eyepiece Holder Ass'y (1AEAB150)
Mirror Box Ass'y

Fig.37

B-6-2 Disassembly of Penta Prism Ass'y

1) Peel off the Penta Dust-proof Moquette (13985800).

2) Remove the shielder from the periphery of the Penta Prism.

3) Remove the Penta Prism Fixer (15986200).

4) Remove the Penta Cover (17484210), Penta Prism (1AE84200) and Penta Prism Retaining Plate (1AA82200).

5) Remove the PG Holder by pulling the Screen Replacing Claw of the Penta Prism Holder and take out the Focusing Glass (17484900).

6) Remove the Finder Mask Frame (1AE84510).

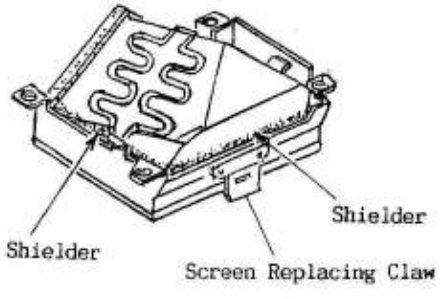


Fig.38

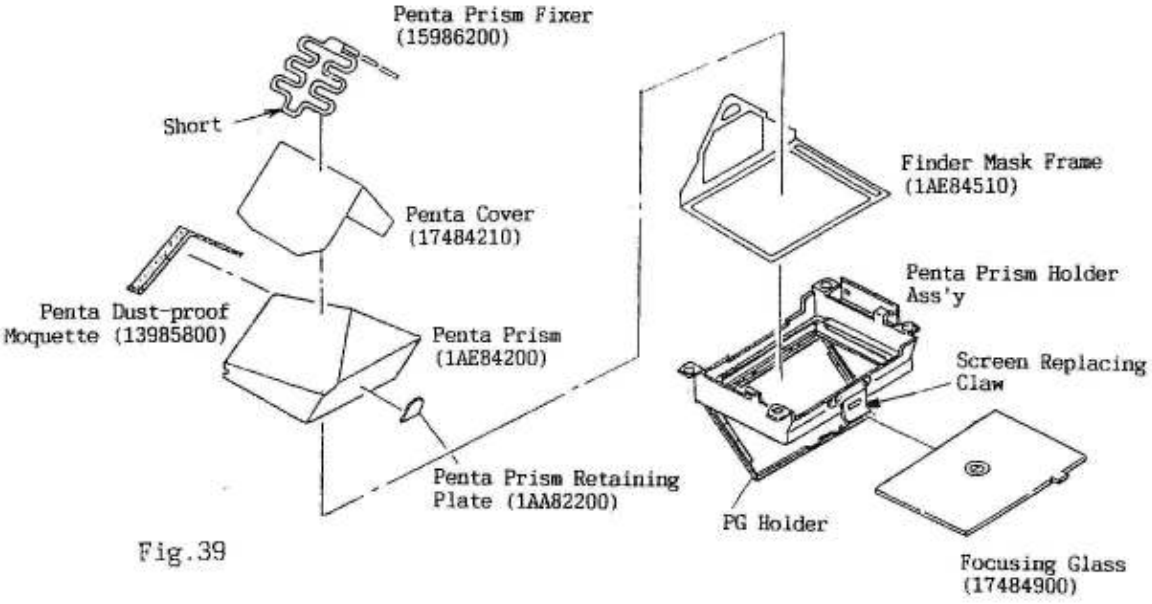


Fig.39

B-6-3 QR Base Plate Ass'y

1) Remove the QR Base Plate Setscrews (61912026) X 3 and take off the QR Base Plate Ass'y (1AEAB020).

2) Remove the Revolving Limit Switch Setscrew (61922526) and take off the Revolving Limit Switch (1AA57300).

3) Remove the GS Ring (GS-20) (66172022) ① and take off the QRL-4 (14772500) and QRL-4 Spring (1AE72600).

4) Remove the QRL-2 Spring (1AE80400).

5) Remove the GS Rings (GS-20) (66172022) ② and ③. Then take off the QRL-1 Spring (13971620) and QRL-1 Ass'y (06520100).

6) Remove the GS Ring (66172022) ④ and take off the QRL-3 Spring (13972430), QRL-2 Ass'y (06520200) and QRL-3 Ass'y (1AEAB110).

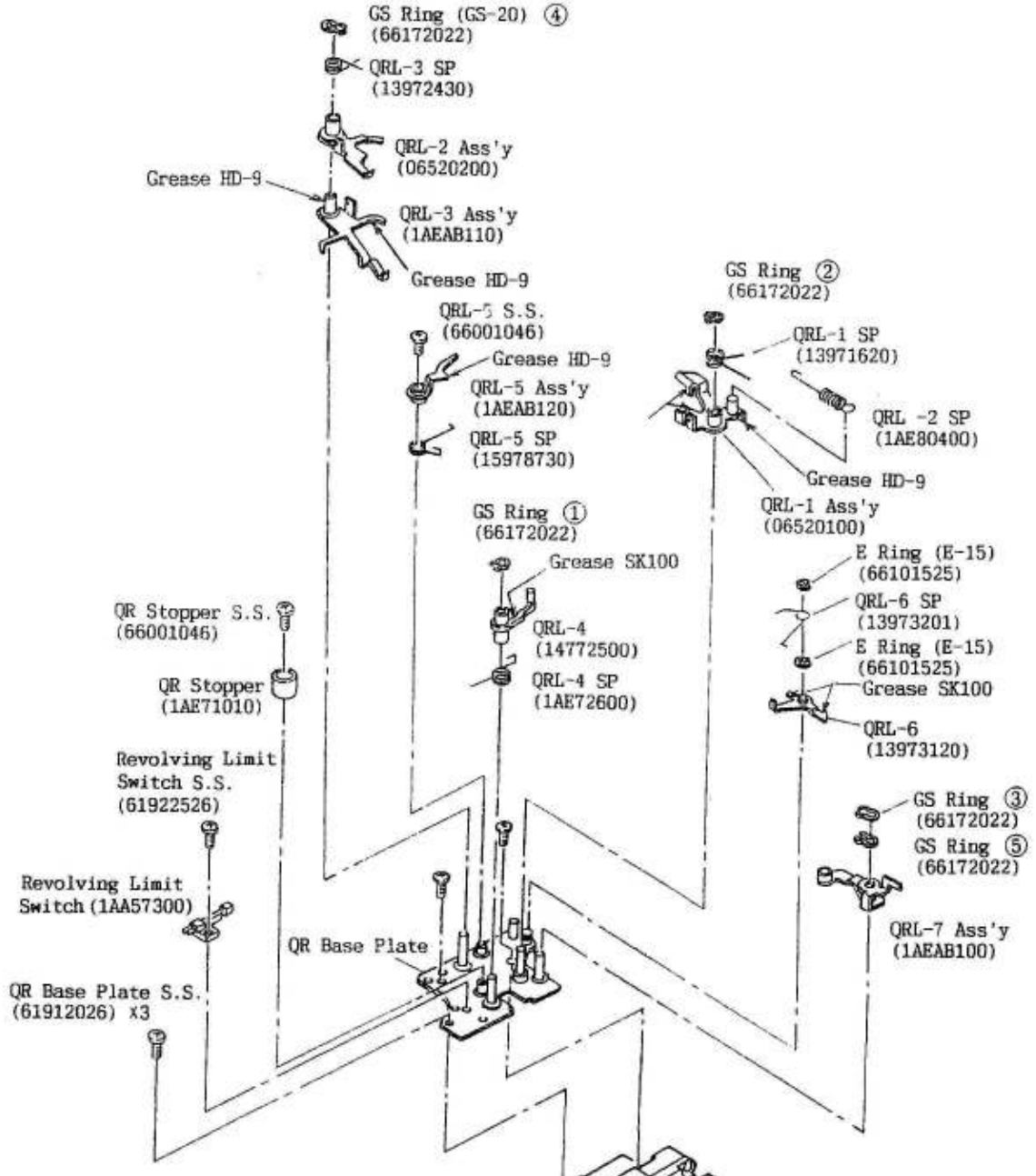
7) Remove the QRL-5 Setscrew (66001046) and take off the QRL-5 Ass'y (1AEAB120) and QRL-5 Spring (15978730).

8) Remove the E Ring (E-15) (66101525) and take off the QRL-6 Spring (13973201).

9) Remove the E Ring (E-15) (66101525) and take off the QRL-6 Spring (13973120).

10) Remove the GS Ring (66172022) ⑤ and take off the QRL-7 Ass'y (1AEAB100).

Disassembly of QR Base Plate Ass'y



[Grease Application Position on QR Base Plate]

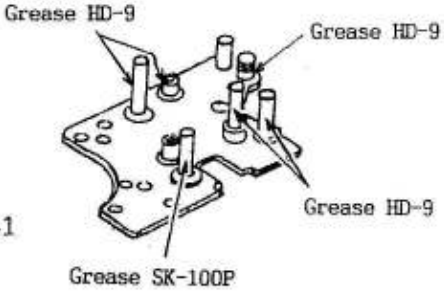


Fig.41

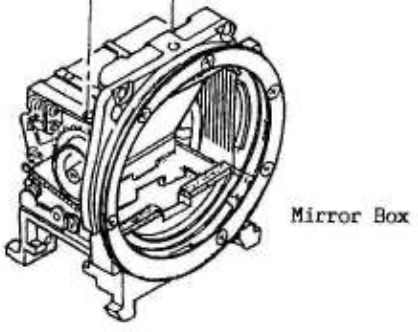


Fig.40

[How to Set Spring on QR Base Plate Ass'y]

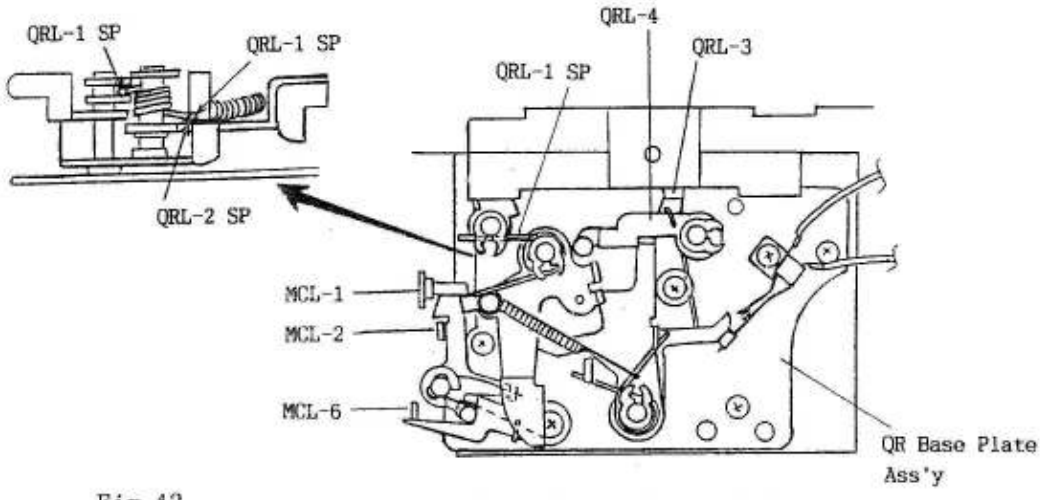


Fig.42 (Bottom View of Mirror Box)

[How to Install Revolving Limit Switch]

Push the Revolving Limit Switch in the direction of the arrow as far as the play is eliminated.

(Adjustment of Revolving Limit Switch)

The standard adjustment is as follows:

a) The Revolving Limit Switch must be kept OFF until the middle point (* mark) of the width of the QRL-3 passes the point Ⓒ.

b) Make sure that the switch is turned ON after the point * has passed the point Ⓒ. Also make certain that the contact Ⓐ is slightly pushed back by the contact Ⓑ at turning-ON.

c) If the conditions a) and b) are not met, make adjustment by bending the contact Ⓐ. (Take care not to bend the contact Ⓐ excessively.)

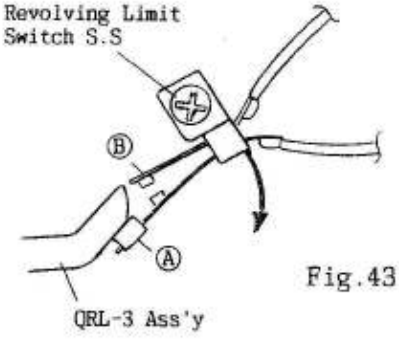


Fig.43

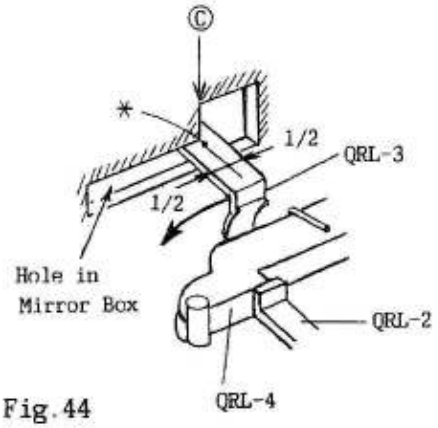


Fig.44

[Adjustment of Mounting Position of AVR Ass'y]

1) Turn the F. Stop Connecting Ring (13982310) until it comes in contact with the Stopper on the open side (in the direction of the arrow). (See Fig.45)

2) With the arrow mark of the F. Stop Interlock Gear positioned as shown in Fig.46, engage the F. Stop Interlock Gear with the gear of the F. Stop Connecting Ring.

3) Tighten the AVR Ass'y Setscrews (61912026) × 2.

4) Turn the F.Stop Connecting Ring clockwise once. Then turn it back again and make sure that the arrow mark on the F.Stop Interlock Gear returns to the position shown in Fig.46.

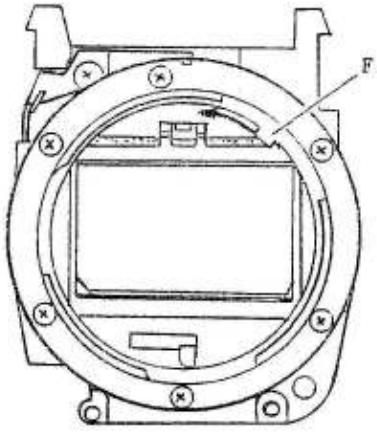


Fig.45

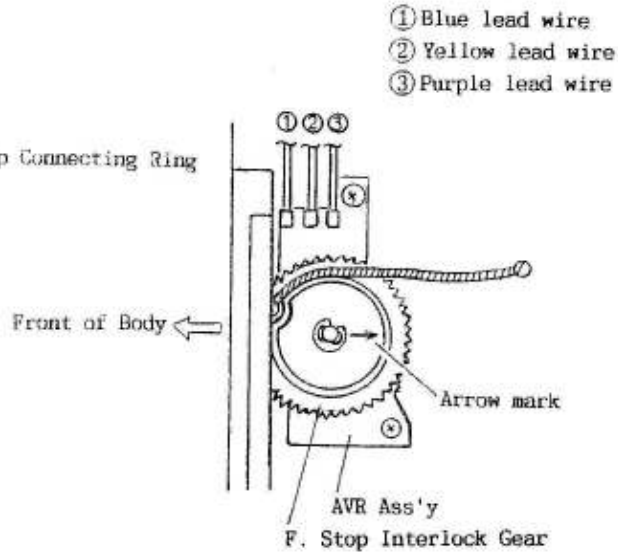


Fig.46

[Notes on Repair on ML Base Plate Ass'y]

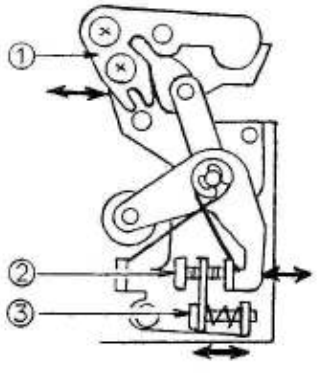
* The horizontal and 45-degree positions of the Mirror have been adjusted on the ML Base Plate Ass'y. Therefore, do not remove the ML Base Plate Ass'y nor change the lever positions or turn the screws.

① Screw for horizontal position adjustment of mirror

② Screw for 45-degree position adjustment of mirror

③ Screws for vertical position adjustment of mirror and fine adjustment of focusing

* When large adjustment of focusing is required, replace the washer under the Penta Prism Holder with an apropriate one. (Because of the field-of-view ratio of 95%, large adjustment of focusing by the screw ③ can cause parallax.)



(ML Base Plate Ass'y)

Fig.47

B-6 OTHER PARTS

B-6-1 Rewind Shaft

1) Apply grease HD-9 to the Rewind Shaft (15934200).

2) Pass the Rewind Shaft through the Rewind Shaft Holder (1AE43620) and install the Rewind Shaft Spring (13934300) in the direction shown in Fig.48.

3) Lock the Rewind Shaft Spring with bond (C-551).

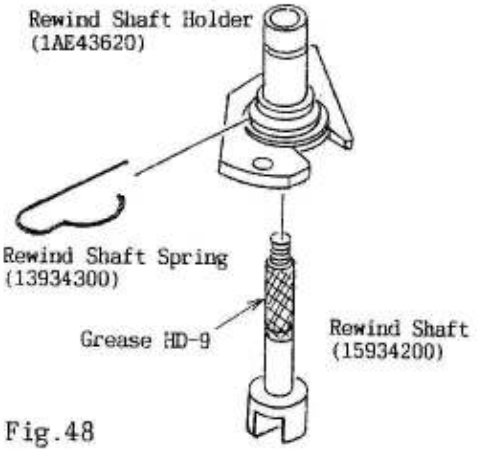


Fig.48

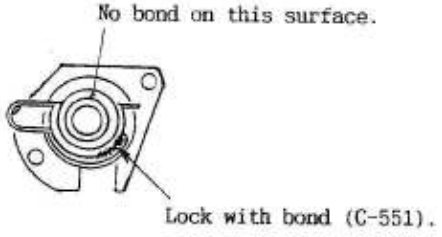


Fig.49

B-6-2 Check Switch

1) Put the Exposure Check Switch (1AE34200) on the Check Switch Plate (1AE34400) and tighten it with the Exposure Check Switch Setscrew (61914526).

2) Bend upward by about 10 to 20 degrees the terminal of the Exposure Check Switch connecting the black lead wire.

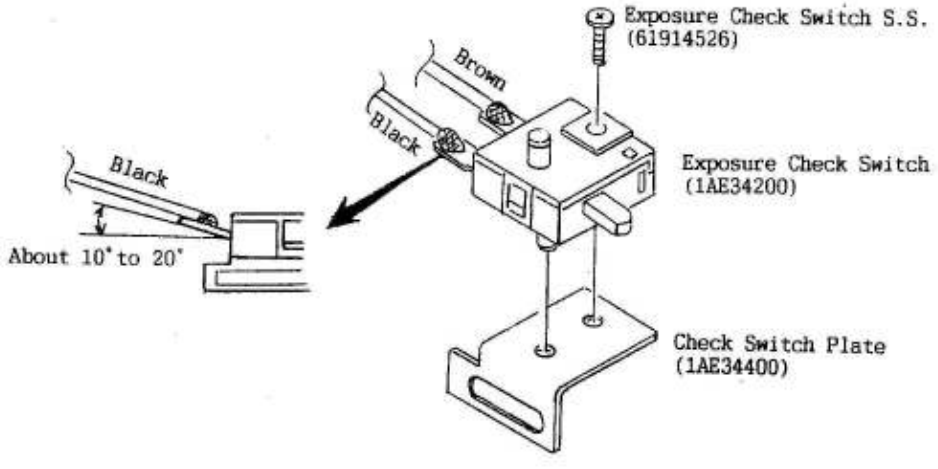


Fig.50

C. ADJUSTMENT PROCEDURE AND OTHERS

C-1 ADJUSTMENTS OF WINDING MECHANISM

C-1-1 Adjustment of Perforation Position

When the Winding Lever has been operated up to the fylly wound position, the tooth position of the Sprocket (15937020) must be as shown in Fig.51. For Adjustment, change the position of the Sprocket Shaft (15964700) and the engagement between the marking-off line of the Idle Gear (A) and the center-punched mark of the W. Gear (1AE60200). (See page B-20)

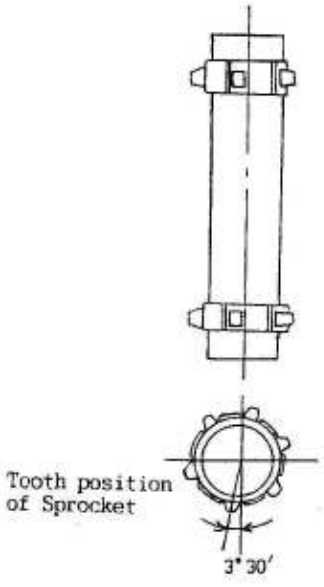


Fig.51

C-1-2 Adjustment of Sprocket Shaft Operation

At press of the Rewind Button, the Sprocket Shaft must be locked and the Sprocket must become turnable freely. The idling of the Sprocket must be smooth without uneven turning or catching.
With your finger touching gently the middle portion of the Sprocket, push in the Sprocket Shaft and lock it, and operate the Winding Lever. Then make sure that the Sprocket Shaft is released and the Sprocket can not idle. Check these operations three times.
For adjustment, correct the position of the Sprocket Release Spring.

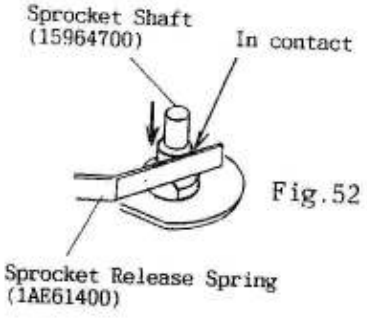


Fig.52

C-1-3 Adjustment of OR Stopper Lever

When the Winding Lever has been operated, the OR Stop Lever must fit in the notch of the Sprocket Shaft without play. When the Rewind Lever is returned, the OR Stop Lever must be released from the notch of the Sprocket Shaft.
For adjustment, turn the OR Stop Lever Shaft.

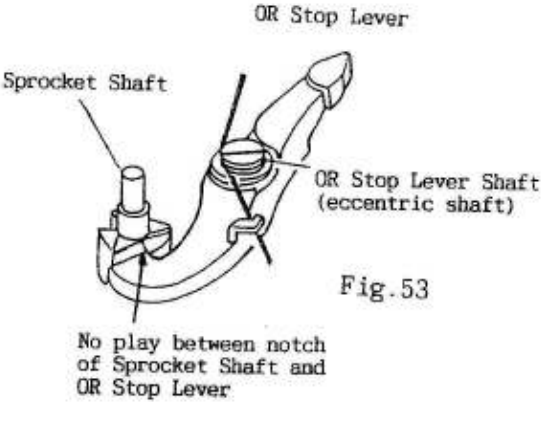


Fig.53

C-1-4 Adjustment of Anti-reversing Lever

When the Winding Lever is operated with the Sprocket loaded lightly, the Anti-reversing Lever(1AE64100) must enter the cam portion of the W. Gear (1AE60200) immediately (0.1 mm) before the end of winding operation. For adjustment, turn the Anti-reversing Collar (Upper) (1AE64200) (eccentric collar).

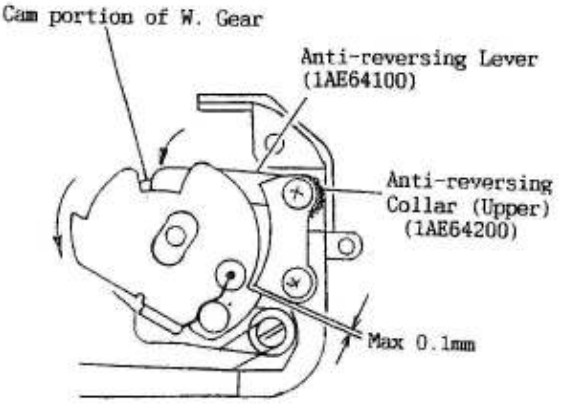


Fig.54

C-1-5 Adjustment of ME Block Plate

During winding, when the outermost cam portion of the W. Gear is in contact with the ME-W Lever (1AE67610) as shown in Fig.56 (when the Anti-reversing Claw on the bottom of the Body is enganged with the last tooth of the Setting Cam Plate), the clearance between the ME Block Plate (1AE67900) and the ME-W Lever must be 0.1 to 0.3 mm. (See Fig.55)
Immediately before stop of winding, the end of the ME-W Lever must be engaged with the ME Block Plate.
For adjustment, loosen ME Block Plate Setscrew (61912026) and change the position of the ME Block Plate.

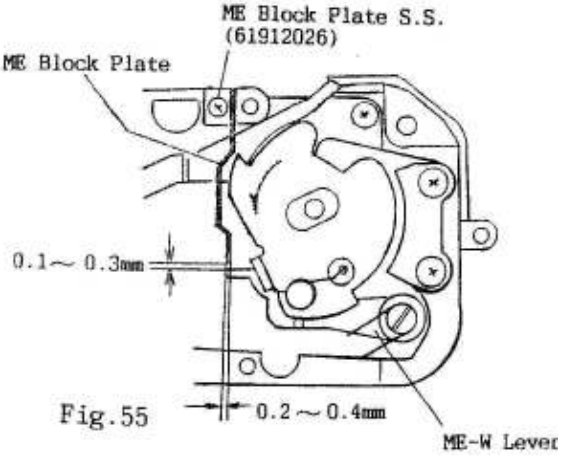


Fig.55

Notes:

a) When the W. Interlock Plate comes to the position as shown in Fig.57 during its turning, make sure that the ME Block Plate is not pushing against the end of the W. Claw.

b) During the winding operation of the W. Interlock Plate, the ME Block Plate must enter inside the end of the ME-W Lever.
And after completion of winding, make sure that the ME-W Lever is unlocked when the W. Interlock Plate has passed the position shown in Fig.57 during reversing.

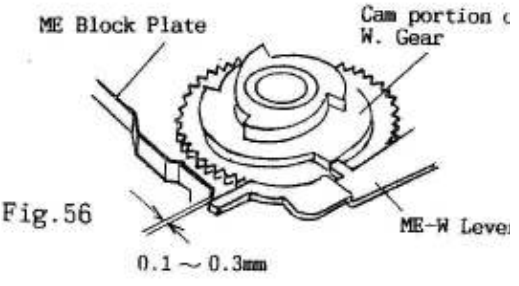


Fig.56

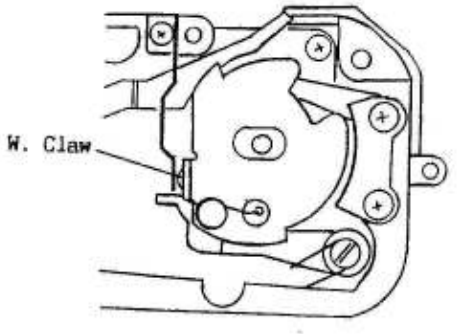


Fig.57

c) After adjustment, lock the ME Block Plate Setscrew with bond (C-551).

C-1-6 Adjustment of Anti-reversing Claw Release

When the Winding Lever is operated with the Sprocket loaded lightly, the Anti-reversing Lever (1AE64100) must enter the cam portion of the W. Gear (1AE60200) immediately (0.1 mm) before the end of winding operation. And after that, the Anti-reversing Claw (14763800) must be released from the teeth of the Set Cam Plate Ass'y (1AEAA330).
Make adjustment by turning the Anti-reversing Claw Collar (14763700).

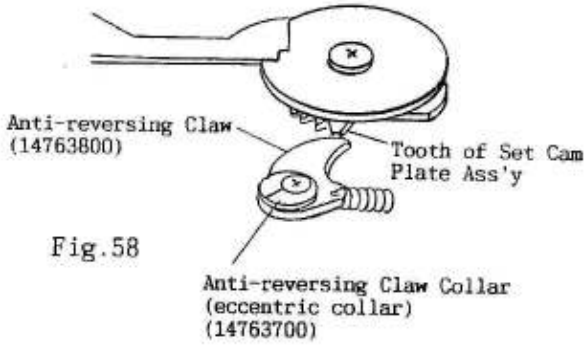


Fig.58

C-2 ADJUSTMENTS OF OTHER MECHANISMS

C-2-1 Adjustment of Check Switch Plate Position

1) Set the tester resistance " Ω ".

2) Connect the (+) terminal of the tester to the brown lead wire of the Exposure Check Switch.
Connect the (-) terminal of the tester to the black lead wire of the Exposure Check Switch.

3) Press the Release Shaft and insert a 0.5 mm flat gauge between the W. Base Plate and the Release Shaft. In this state, adjust the position of the Exposure Check Switch so that the switch is turned ON (current flowing).

4) Insert a 0.3 mm flat gauge between the W. Base Plate and the Release Shaft and make sure that the Exposure Check Switch is OFF.
Make adjustment so that the Exposure Check Switch is turned ON at pressing down the Release Shaft by 0.3 to 0.5 mm.

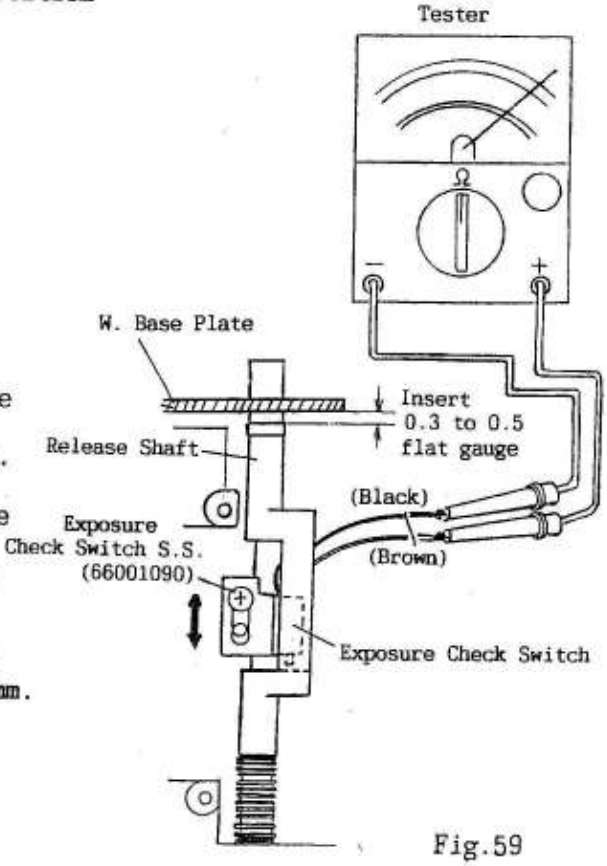


Fig.59

5) After adjustment, lock the Check Switch Plate Setscrew (66001090) with bond (C-551).

C-2-2 Adjustment of Shutter Releasing Position at Use of Selftimer

After installing the Mirror Box Ass'y on the Body, adjust the shutter releasing position at use of selftimer.

[Check]

1) Set the Selftimer Lever in the direction of the arrow Ⓐ.

2) Operate the Winding Lever. Press the Release Shaft and, at the same time, move the Mirror up slowly.

3) The Selftimer must start operating immediately (0.3 mm or more) before the Mirror comes in contact with the Mirror Cushion.

4) If it does not start, make adjustment as follows:

[Adjustment procedure]

1) Using tweezers, bend the Lever Ⓑ of the Shutter slightly in the direction of the arrow.

2) Set the Selftimer Lever in the direction of the arrow Ⓐ.
(The Lever must not return of itself.)
The Selftimer Lever may return of itself if the Lever Ⓑ is bent excessively. In such a case, correct the bend so that the Selftimer Lever does not return of itself.

3) After making sure that the Selftimer Lever does not return of itself, take the steps 1) and 2) of "Check" above.

4) Perform setting of Selftimer, winding and shutter release and make sure that the Selftimer starts.

5) Perform the operations 3) and 4) once again.

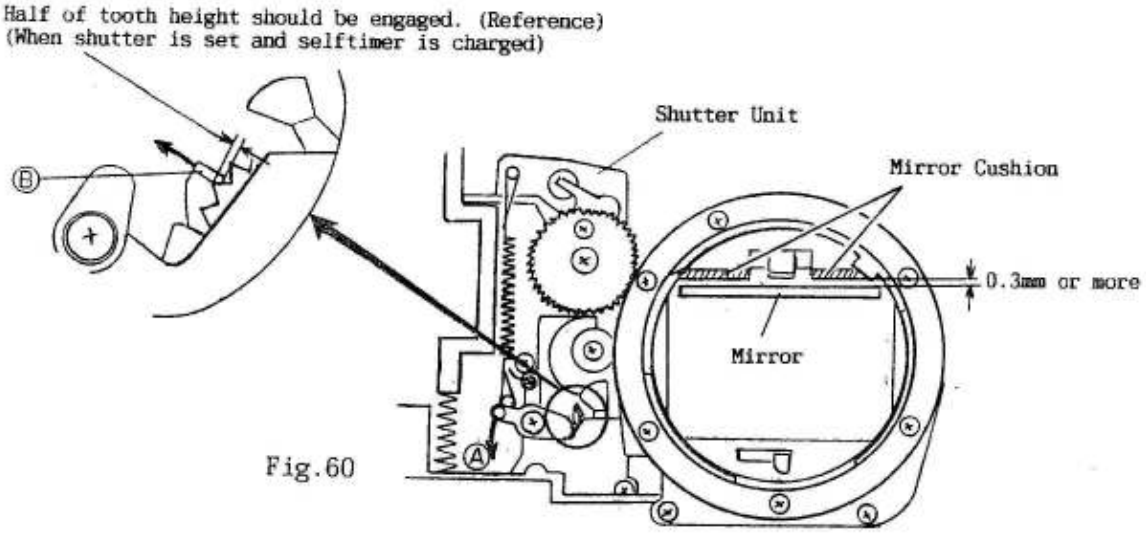


Fig.60

C-2-3 Adjustment of S. Dial Click

* Make adjustment so that the click of the S. Dial Base Plate Ass'y and the click of the Shutter occur at the same time.

[Adjustment procedure]

1) Set the Shutter Speed Setting Gear so that the screw Ⓐ of the Shutter is positioned just above the screw Ⓑ. (Bulb position)

2) Loosen the screws Ⓐ and Ⓑ.

3) Engage the S. Dial Base Plate Ass'y (in the "bulb" position) with the Shutter Speed Setting Gear from above.

4) Tighten the screw Ⓑ. (Take care not to apply an irrational force to the Shutter Speed Setting Gear.)

5) Tighten up the screw Ⓐ.

6) Tighten the S. Dial Base Plate Setscrews.

7) By turning the S. Dial Shaft clockwise and counterclockwise, make sure that double clicks do not occur.

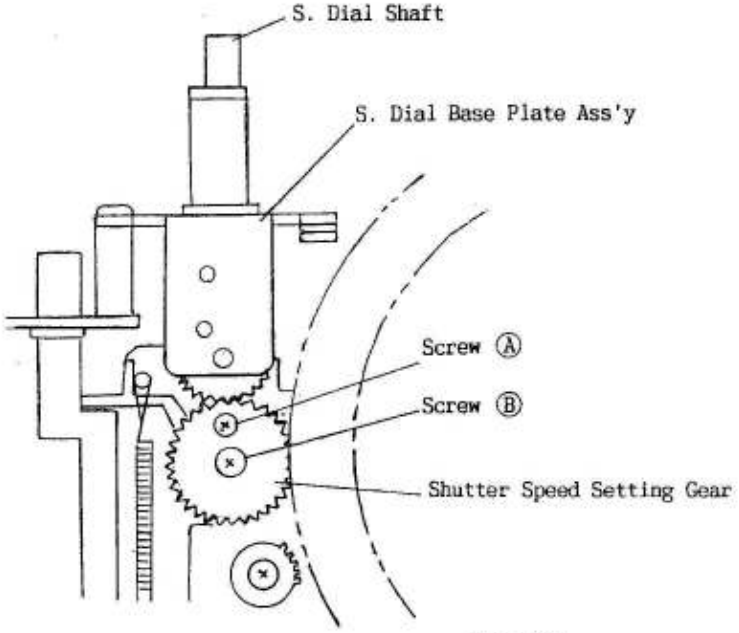


Fig.61

C-2-4 Adjustment of Shutter Releasing Position at Press of Shutter Release Button

* After installing the Top Cover, make adjustment of shutter releasing position.

[Adjustment procedure]

1) Charge the Mirror Box mechanism and Shutter by performing winding operation.

2) Press down the Release Button and check to see if the Shutter operates when the Release Button is leveled with the Main Switch Dial (when A and B is in the same level). (See Fig.62)

3) If the Shutter does not operate, make adjustment by turning the SR Lever (3) Post (eccentric pin). (See Fig.63)

Note:

a) **On the camera having been already adjusted, the SR Lever (3) Post has been locked with Crazy glue or Super glue, so that it can not be turned.**
In such a case, make adjustment by bending the SR Lever (3) with flat pliers.

4) After adjustment, check the following conditions:

- The shutter must not trip of itself after winding.
- With the Aperture Button pressed, the shutter must not trip of itself after winding.
- The QRL-4 must not be too close to the end of the hole in the Body.

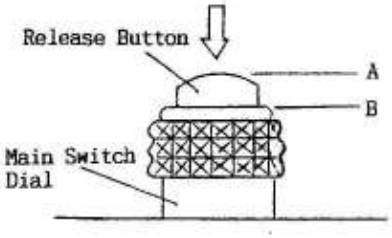


Fig.62

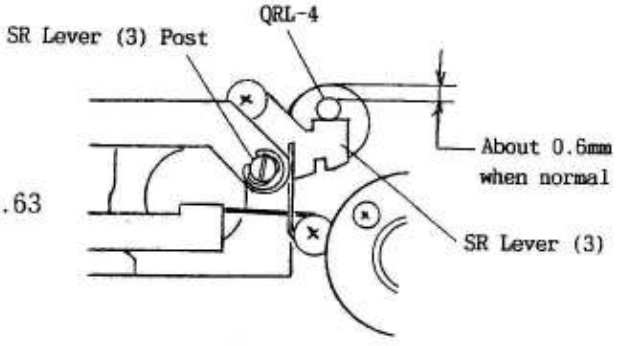


Fig.63

5) After adjustment, apply a small amount of Crazy glue or Super glue to the SR Lever (3) and SR Lever (3) Post and then apply bond (C-551).

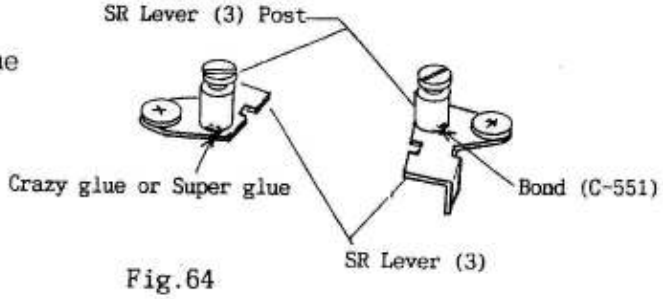


Fig.64

C-3 OTHER ADJUSTMENTS

C-3-1 Adjustment of Spot Metering Position

* After the replacement of the Eyepiece Ass'y, if performed, be sure to adjust the spot metering position.

[Adjustment procedure]

1) Remove the Shoe Contact Holder Setscrew (69114076) and take off the Shoe Contact Holder.

2) Remove the SPD Ass'y (1AEAE200).

3) Place the camera in position 10 to 15 cm away from an incandescent lamp so that the light from the lamp enters the hole in the Light Sensor Holder (1AE85100).

4) From front of the Body, look at the center of the Mirror. By turning the SPD Adjuster (eccentric pin), make adjustment so that the light from the incandescent lamp comes to the center of the Mirror (the light shines on the split image area of the Focusing Glass).

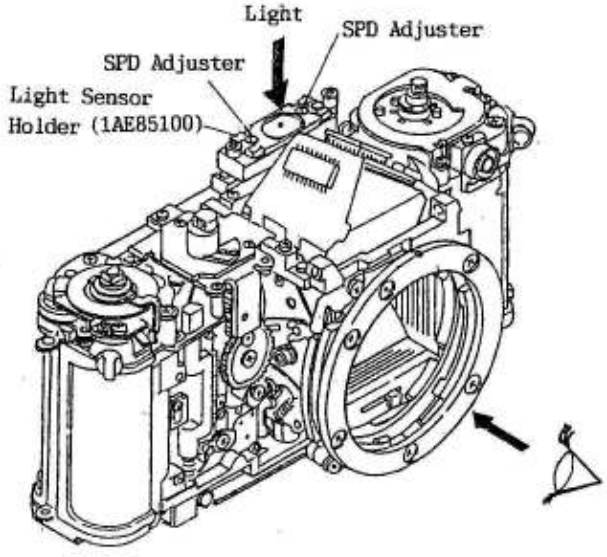


Fig.65

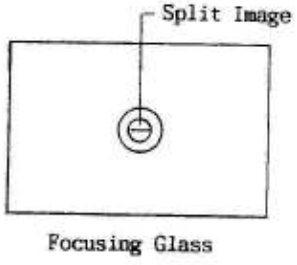


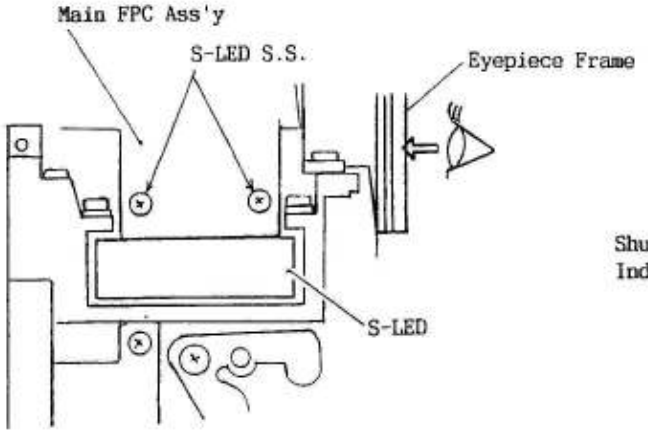
Fig.66

C-3-2 Adjustment of Indicator Position in Viewfinder

* Be sure to make this adjustment when reinstalling or replacing the Main FPC Ass'y.

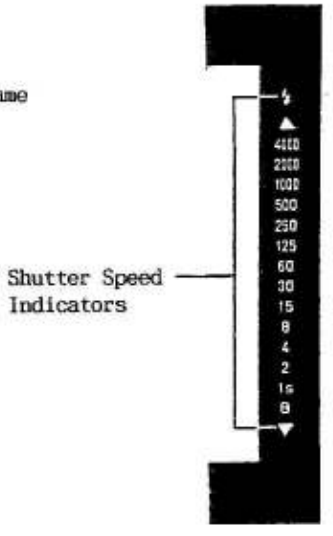
[Adjustment procedure]

1) Install the Main FPC Ass'y and connect the lead wires.
2) Do not install the ISO Turning Limit Plate or ISO Contact Base Ass'y.
3) Set two batteries (LR44) in the Battery Case.
4) Press the Release Shaft halfway down. (The power will be held for 16 sec.)
5) Place your eye at the center of the Eyepiece and adjust the position of the S-LED so that none of all the LEDs for " ▽ " "B" to " △ " " ϟ " are eclipsed.
6) Tighten up the two S-LED Setscrews.



(Right Side View of Mirror Box)

Fig.67



(Display in Viewfinder)

Fig.68

C-3-3 Flange Back Adjustment

◦Distance from the lens mount surface to the rail surface on the film side:

45.42 ± 0.02 mm

For adjustment, insert an appropriate washer between the body mount and the Mirror Box.

Adjusting washers: 0.05 mm (128666), 0.02 mm (128667)

◦Difference in level between the rail surface on the film side and that on the pressure plate side:

0.20 ± 0.02 mm

C-3-4 Adjustment of Finder Focusing

1. Rough adjustment of finder focusing

Make adjustment by replacing the washer placed under the Penta Prism Holder. (See Fig.37)

① If the focus is not adjusted even when the focus ring is turned to the infinity position

⟹The finder back is too long. Lower the focusing screen to shorten the finder back.

② If the focus is adjusted before the focus ring arrives at the infinity position

⟹The finder back is too short. Raise the focusing screen to lengthen the finder back.

2. Fine adjustment of finder focusing

◦When the focus is dislocated to such a degree that the indicator is positioned within ± 1/4 of the "∞" mark width (with the standard lens Planar 1.4/50 is dislocated by 0.1 mm or less), correct it by turning the Focus Adjusting Screw. (See Fig.70)

◦After adjustment by the Focus Adjusting Screw, be sure to operate the shutter several times and then check focusing again.
And then lock the Focus Adjusting Screw with bond (C-551).

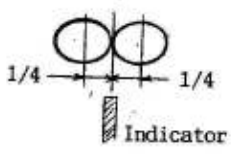


Fig.69

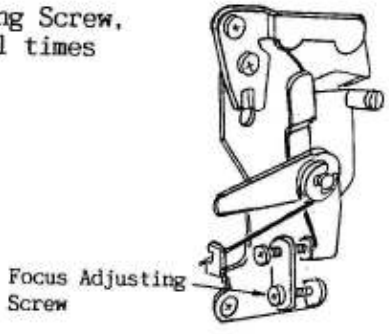


Fig.70

(ML Base Plate Ass'y)

C-3-5 Adjustments of Shutter

* The shutter speed, curtain travel speed and flash synchronization of the Shutter Unit mounted on the camera is adjusted before shipment. Also those of the Shutter Unit as a service part is already adjusted.

1. Shutter speed

Table 1 Allowable range of manual exposure time (Unit: ms)

Marking(S)	Allowable width (EV)	Allowable range		
		Upper limit	Reference value	Lower limit
1	±0.4	1320	1000	758
1/2		660	500	379
1/4		330	250	189
1/8		165	125	94.8
1/15		82.5	62.5	47.4
1/30		41.23	31.25	23.68
1/60		20.62	15.63	11.85
1/125		10.31	7.813	5.921
1/250	+0.5 -0.05	5.523	3.906	3.773
1/500	±0.45	2.667	1.953	1.429
1/1000		1.334	0.977	0.715
1/2000	±0.5	0.690	0.488	0.345
1/4000	±0.6	0.369	0.244	0.160

2. Curtain travel speed

- The first and second curtains must travel vertically the distance of 24 mm in about 24 ms.

3. Flash synchronization

- Delay time

  Sensing point of shutter tester: 21 mm "A" range: 0.4 ms or less

  Measure at 1/250 sec shutter speed. "B" range: 1.0 ms or more

- Contact efficiency

  70% or above for shutter speed of 1/250 sec or slower
  (Check with a 1 ms contact efficiency meter.)

C-3-6 Voltage Adjustments of Main FPC Ass'y

* The adjustments of offset, Vr and B1 level instructed below have been already performed for the Main FPC Ass'y supplied as a service part.

1. Check of Vs

[Checking procedure]

① Connect 3V power supply.
② Turn ON the Check Switch for power-on (The power is held for 16 sec.)
③ Measure the voltage of Vcc.
④ Measure the voltage of Vs.
⑤ The voltage is normal when the value of Vcc-Vs is 1.4V (1.26 to 1.54V).

Note:

a) Measure Vs and Vcc with GND as the reference.

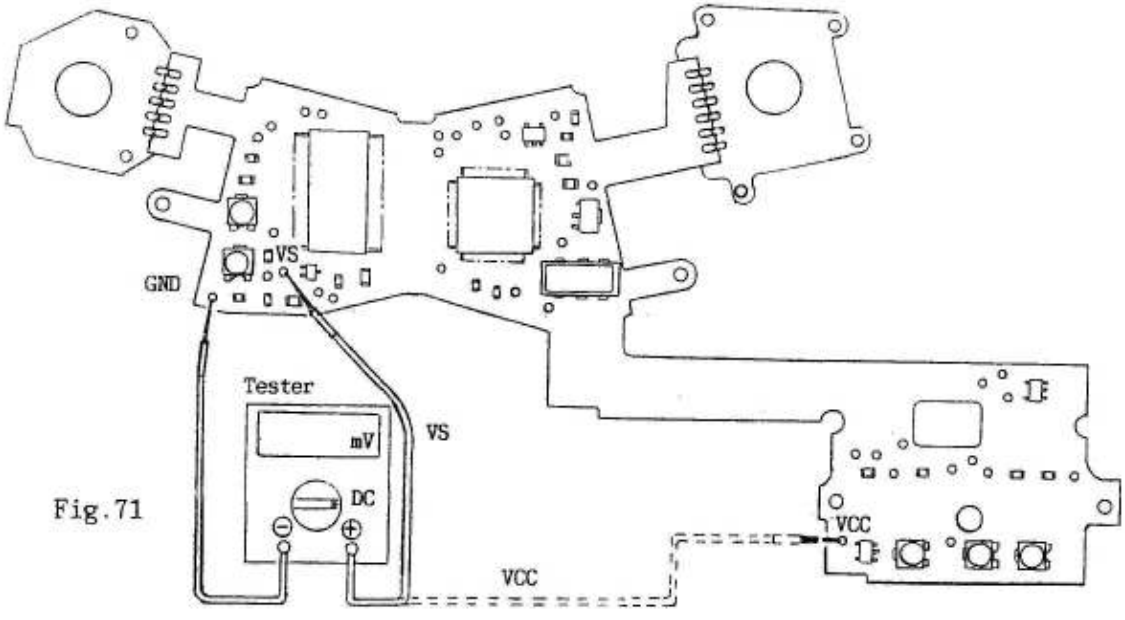


Fig.71

2. Adjustment of offset

[Adjustment procedure] (See Fig.72 and 73)

① Connect 3V power supply.
② Turn ON the Check Switch for power-on (The power is held for 16 sec.)
③ Set a high brightness (LV16 or above) so that sufficient photocurrent flows in the SPD. (See Fig.73)
④ Measure the voltage of Ph1.
⑤ Measure the voltage of Ph2.
⑥ Make adjustment by turning VR1 so that the value of Ph1-Ph2 becomes 0 to 7mV.

Note:

a) The measurements of Ph1 and Ph2 must be performed under the same brightness and with GND as the reference.

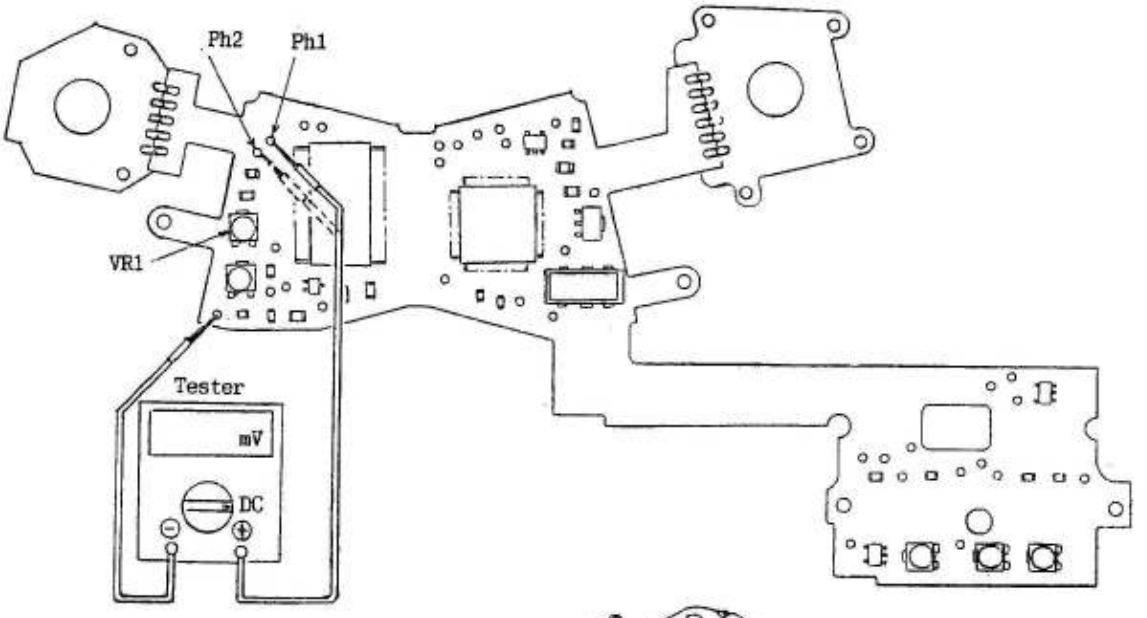


Fig.72

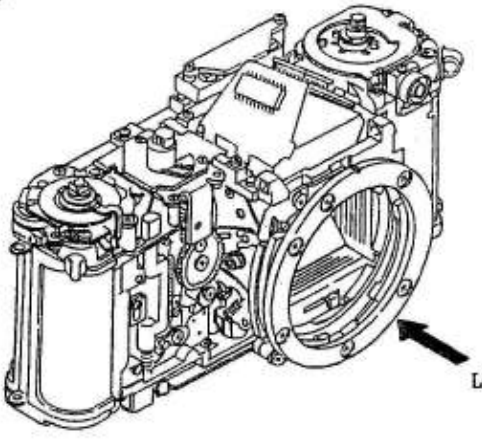


Fig.73

Light of LV16 or above

3. Adjustment of Vr (inclination of the output Vout against change in exposure)

[Adjustment procedure] (See Fig.74)

① Connect 3V power supply.

② Turn ON the Check Switch for power-on (The power is held for 16 sec.)

③ Measure the voltage of Vs.

④ Measure the voltage of Vr.

⑤ Make adjustment by turning VR2 so that the value of Vr-Vs becomes 288 mV.

Notes:

a) Vr may be measured with Vs as the reference. For accurate measurement, however, both Vs and Vr should be measured with GND as the reference.

b) The adjustment value of Vr varies with temperature as shown in Table 2. (288 mV at 25°C)

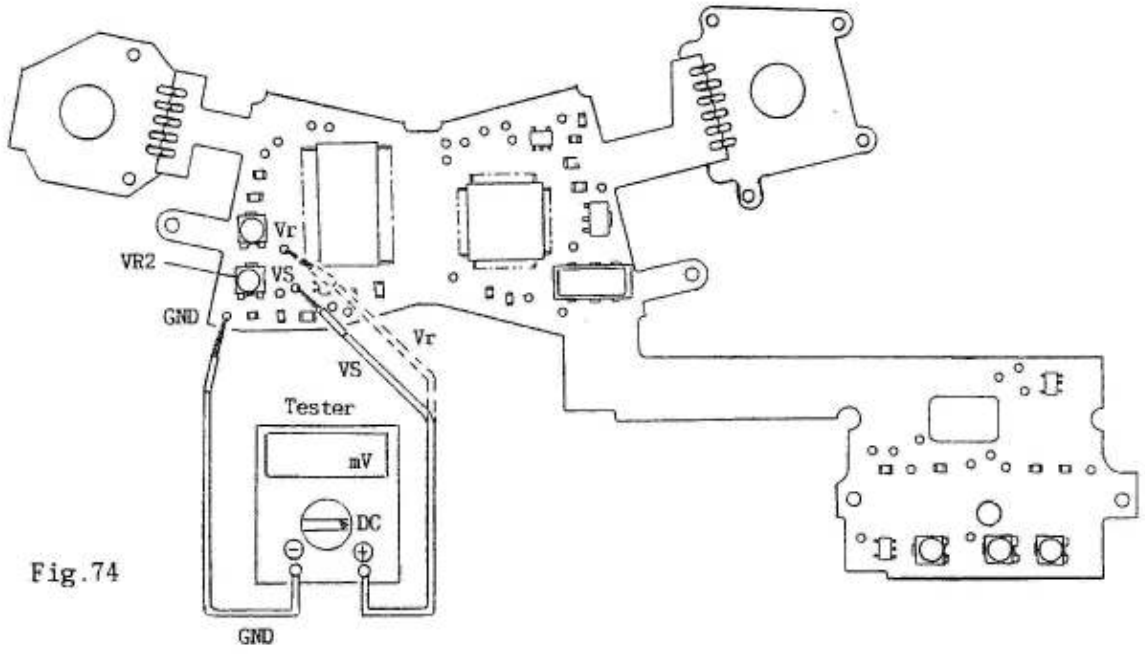


Fig.74

Table 2 Relationship between aperture resistance and temperature

Temperature (°C)	Vr (mV)	Aperture resistance (mV)	Temperature (°C)	Vr (mV)	Aperture resistance (mV)
10	273.5	170.9	21	284.1	177.6
11	274.5	171.5	22	285.1	178.2
12	275.4	172.1	23	286.1	178.8
13	276.4	172.7	24	287.0	179.4
14	277.4	173.3	25	288.0	180.0
15	278.3	174.0	26	289.0	180.6
16	279.3	174.6	27	289.9	181.2
17	280.3	175.2	28	290.9	181.8
18	281.2	175.8	29	291.9	182.4
19	282.2	176.4	30	292.9	183.0
20	283.2	177.0			

4. Adjustment of B1 level (battery check)

[Adjustment procedure] (See Fig.75)

① Connect 2.5V power supply.
② Turn ON the Check Switch for power-on (The power is held for 16 sec.)
③ Measure the voltage of Vs.
④ Adjust VR5 so that the voltage of VJB becomes equal to Vs.
⑤ Set the power supply to 2.45V and turn OFF the power to the camera once (turn ON and then OFF the Shutter Release Switch and wait until power hold comes to an end in 16 seconds).
Then turn ON the Check Switch again and make sure that the display in the viewfinder is blinking at 1 Hz.

Note:

a) Remove the Top Cover when performing the adjustments 1 to 4 above.

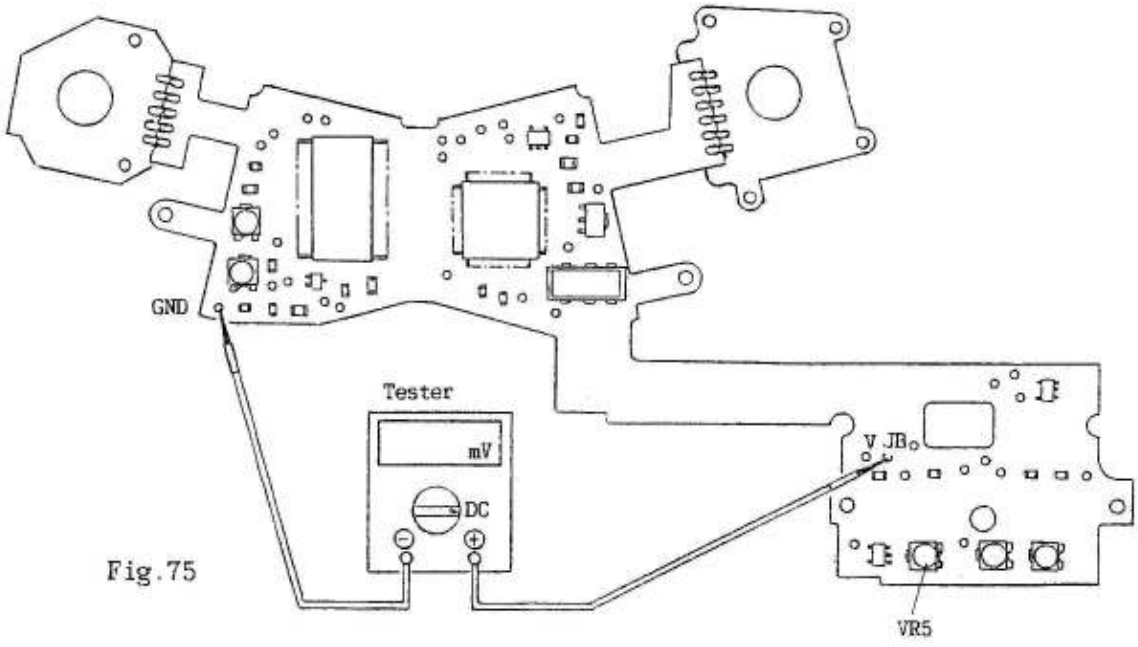


Fig.75

Note:

a) Perform the adjustments 5 and 6 below with the exterior parts installed. Peel off the Leather (Left) (1AE18900) and Pattern Cover (1AE16910). Also remove the Resistor Cover (1AE11000) from the cartridge chamber. And make adjustment by means of the test lands inside the Pattern Cover and the semifixed resistors inside the Resistor Cover.

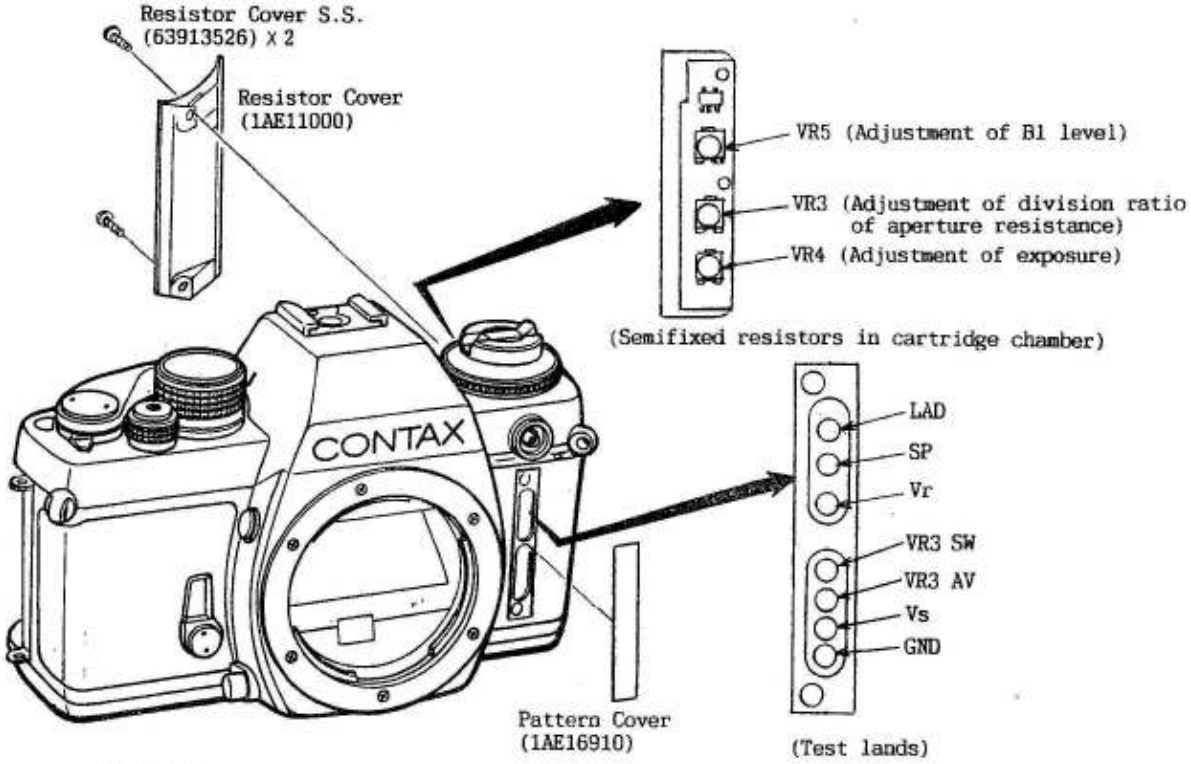


Fig.76

5. **Adjustment of division ratio of aperture resistance**

[Adjustment procedure] (See Fig.77)

① Connect 3V power supply.
② Turn ON the Check Switch for power-on (The power is held for 16 sec.)
③ Short the input and the output of the Analog Switch.
(Short the Vr and the VR3 Switch on the test lands.)
④ Make an adjustment with the semifixed resistance VR3 so that VR3AV of the test land becomes 180mV.

Note:

a) **This adjustment value varies with temperature as shown in Table 2. (180 mV at 25°C)**

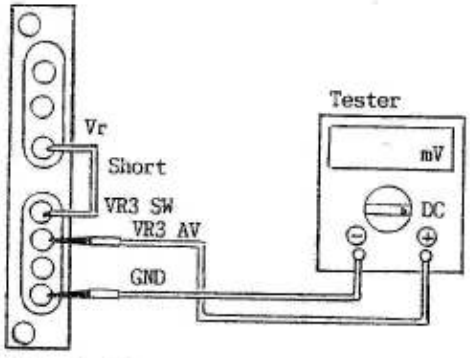


Fig.77

6. **Adjustment of exposure (shift)**

[Adjustment procedure]

① Set the ISO Dial of the camera to "80".

② Set the EE tester to K: 1.3 .

③ Connect 3V power supply.

④ Turn ON the Check Switch for power-on (The power is held for 16 sec.)

⑤ Mount the standard lens (Planar 50 mm/F1.4) and set the focus ring in the infinity position and the aperture to F5.6 .

⑥ Set the brightness of the EE tester to LV12 and set the camera on the EE tester.

⑦ Make adjustment by turning the semifixed resistor VR4 so that the indicator in the viewfinder lights up at "125" only.

⑧ Set the brightness of the EE tester to LV8 and make sure that the indicator in the viewfinder lights up at "8" only.

⑨ Set the brightness of the EE tester to LV15 and make sure that the indicator in the viewfinder lights up at "1000" only.

[Exposure meter]

The value determined from a combination of aperture and brightness values as shown in Table 3 lights up to indicate exposure.

Table 3

Aperture value \ LV	4	5	6	7	8	9	10	11	12	13	14	15
1.4	8	15	30	60	125	250	500	1000	2000	4000	▲	▲
2.0	4	8	15	30	60	125	250	500	1000	2000	4000	▲
2.8	2	4	8	15	30	60	125	250	500	1000	2000	4000
3.5	2.1S	4.2	8.4	15.8	30.15	60.30	125.60	250. 125	500. 250	1000. 500	2000. 1000	4000 2000
4.0	1S	2	4	8	15	30	60	125	250	500	1000	2000
4.5	▼	2.1S	4.2	8.4	15.8	30.15	60.30	125. 60	250 125	500 250	1000 500	2000 1000
5.6	▼	1S	2	4	8	15	30	60	125	250	500	1000
8.0	▼	▼	1S	2	4	8	15	30	60	125	250	500
11.0	▼	▼	▼	1S	2	4	8	15	30	60	125	250
16.0	▼	▼	▼	▼	1S	2	4	8	15	30	60	125
22.0	▼	▼	▼	▼	▼	1S	2	4	8	15	30	60

Overexposure warning : "▲" blinking at 2 Hz

Underexposure warning: "▼" blinking at 2 Hz

K value = 1.3
ISO = 80

C-4 OTHERS

C-4-1 Current Consumption

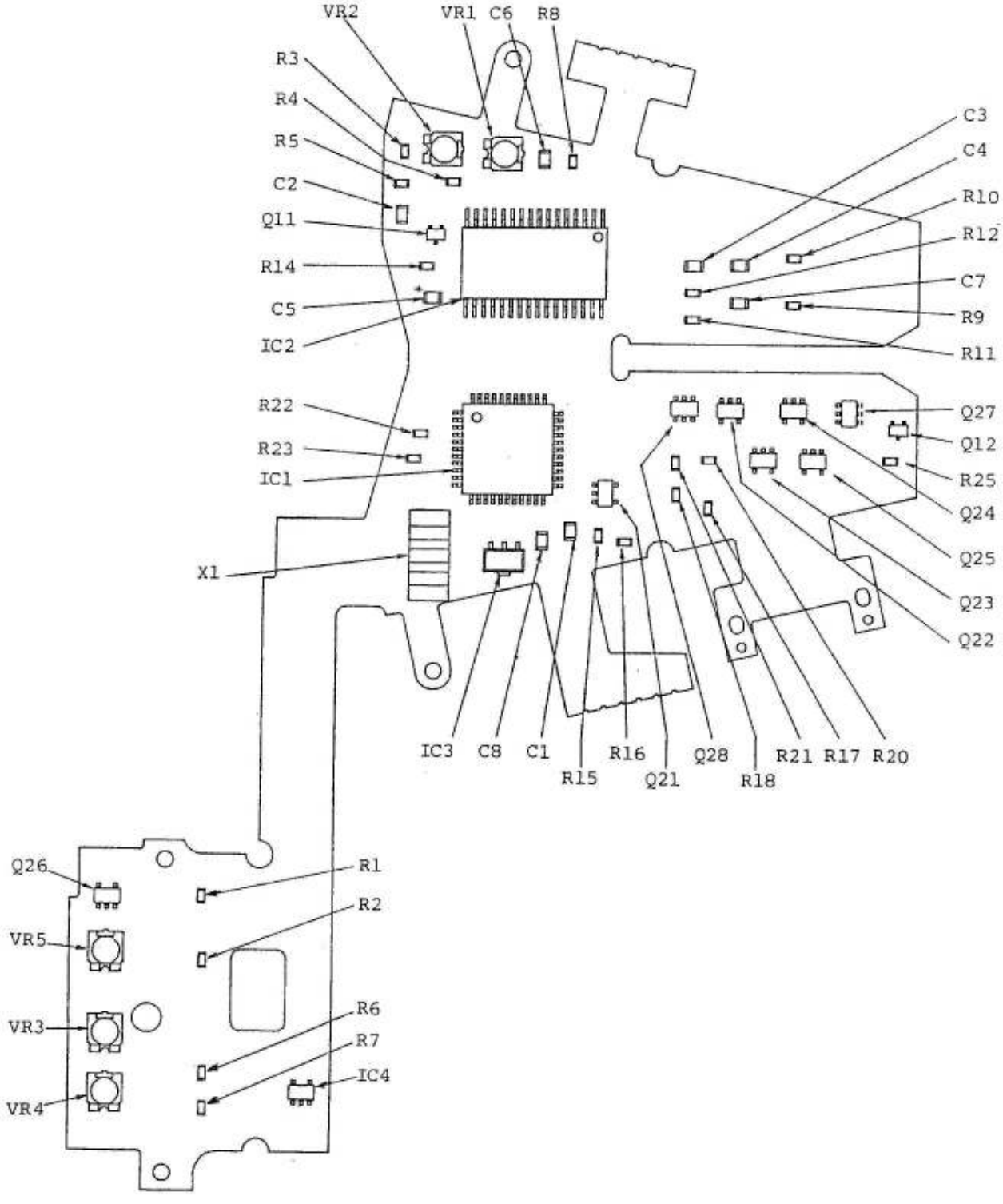
When indicator in viewfinder is not lighting : 5 μA or less
When indicator in viewfinder is lighting : 15 mA or less

C-4-2 Battery Voltage

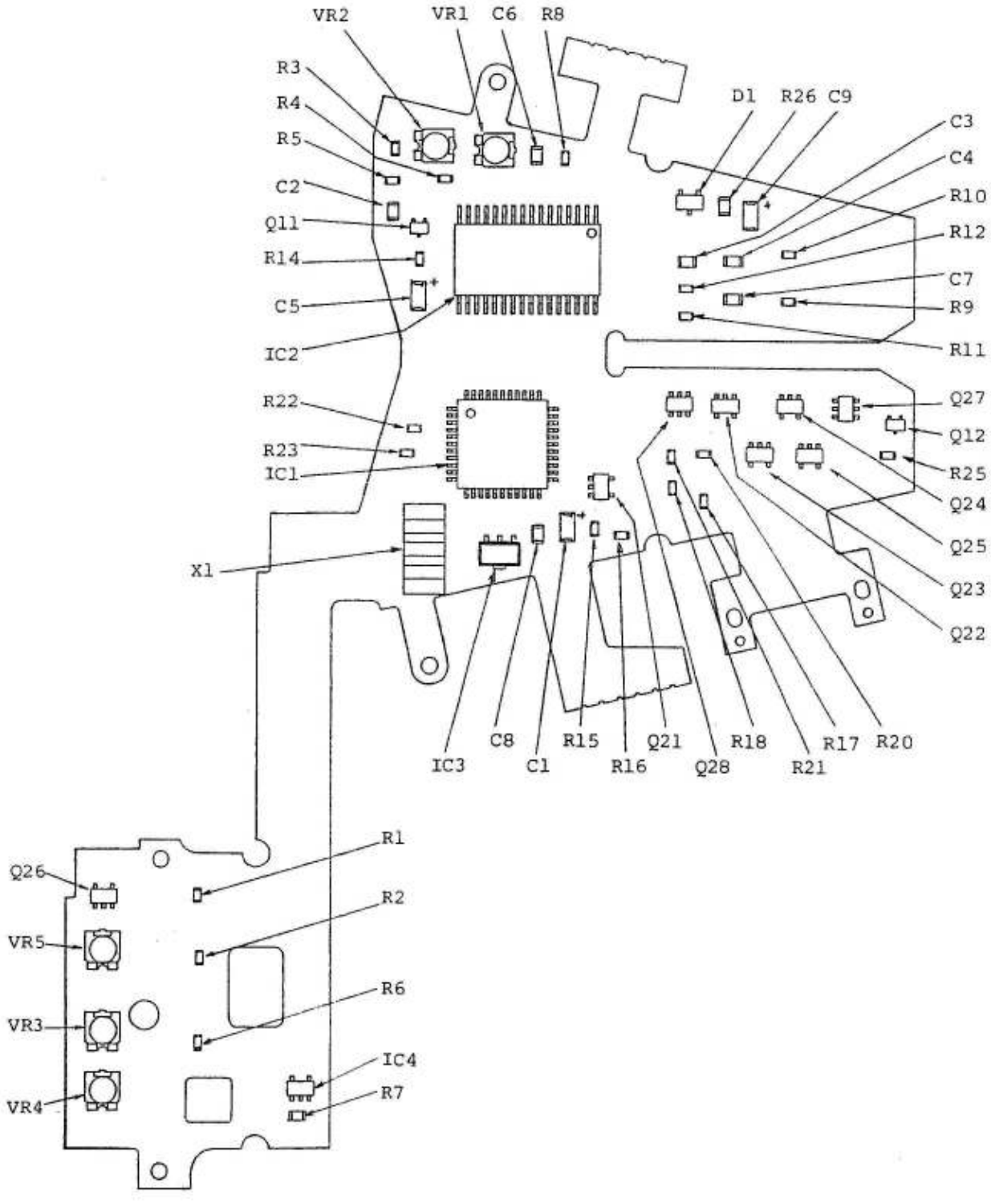
3.0V
(Normal indication
2.5V
(Warning (Indicator in viewfinder blinking at 1 Hz)
2.4V

All functions in viewfinder stop at 2.4V or below.

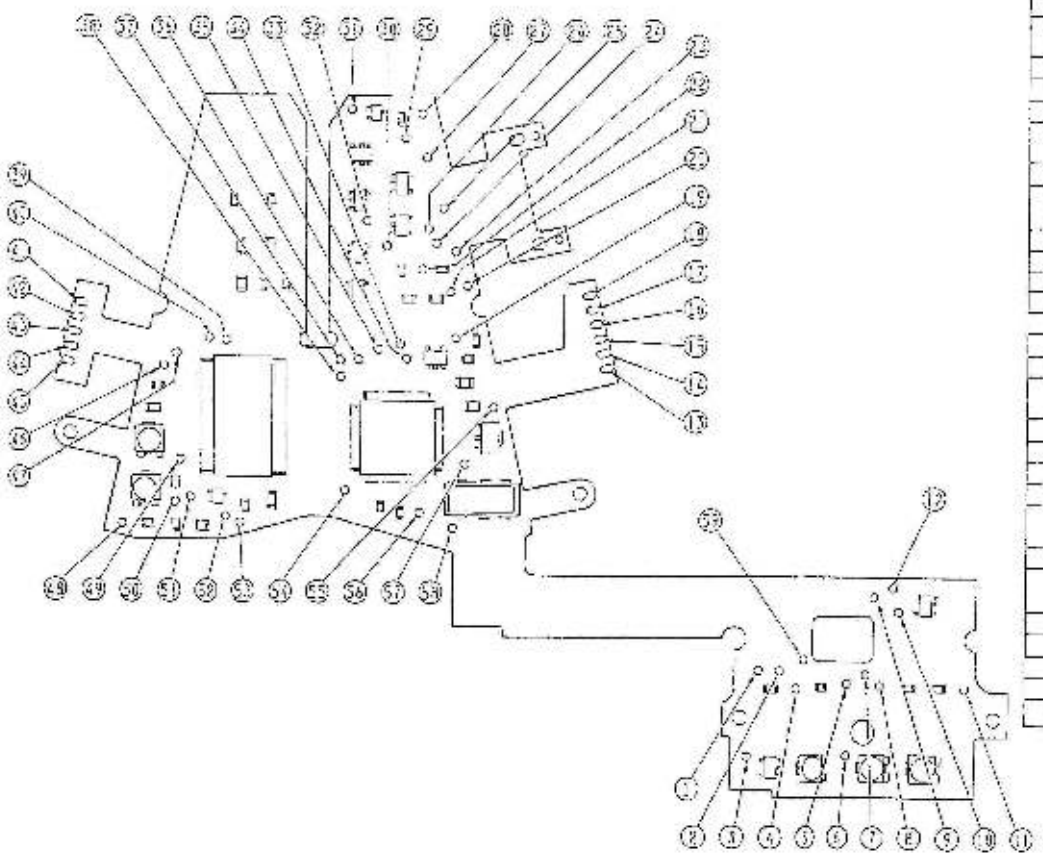
Electric Parts on Old Main FPC



Electric Parts on New Main FPC



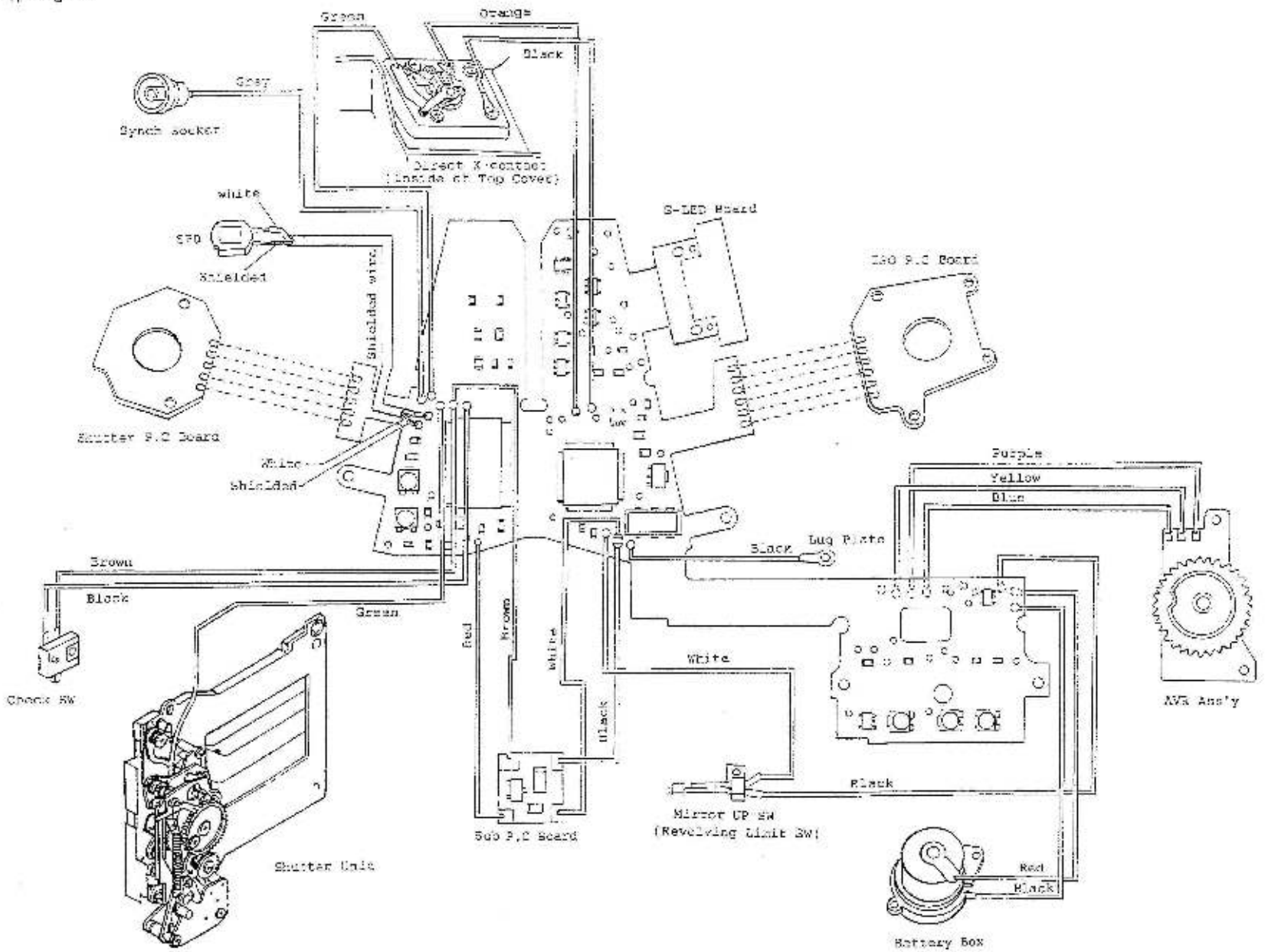
Test Lands on Main FPC



Test No.	Symbol	Description	Test No.	Symbol	Description
1	P63	CPU Vcc control output	33	GND	GND
2	VJB	Analog IC V JB	34	P20	SEC. C
3	Vcc	Vcc	35	ACC	Charge ready signal input terminal
4	COMP. OUT	Analog IC LAD output	36	P22	NC
5	VF	Analog IC VF	37	P50	LSD brightness control
6	Q26B	Connection of Q25 NPN collector and PNP base	38	P23	91 level warning input
7	VBAT	VBAT	39	GND	GND
8	VJ	Analog IC VJ Note	40	PB0	Check SW input
9	P61	NC	41	GND	SH code GND
10	P51	Analog SW control terminal	42	P31	SH code 1
11	GND	GND	43	P32	SH code 2
12	PB1	Amplifier check mode input 1	44	P30	SH code 3
13	P42	ISO code 2	45	P33	SH code 3
14	GND	ISO code GND	46	PB1	SPD cathode
15	P40	ISO code C	47	PB2	SPD anode
16	P41	ISO code 1	48	GND	GND
17	P43	ISO code 3	49	Vr	Analog IC Vr
18	PC0	ISO code 4	50	VA	Analog IC VA
19	P21	SYS.1	51	Vs	Analog IC Vs
20	LEDA3	Between Q21-R17	52	PC3	LED inversion input SYS0
21	LED1	LED anode ▲~60	53	VBAT	VBAT
22	LEDA2	LED anode 30~▼	54	P52	SP signal CLOCK IN
23	LEDK8	LED cathode ▼ 60	55	VRST	Reset IC input
24	LEDK6	LED cathode 1, 250	56	PC2	Release SW
25	LEDK2	LED cathode 15, 4000	57	RSC	Reset IC output (CPU input)
26	LEDK5	LED cathode 2, 500	58	GND	GND
27	LEDSTA	Flash charge ready LED anode	59	PB2	Amplifier check mode input 2
28	VBATC-	Battery check dummy load-			
29	LEDK1	LED cathode 30, ▲ VBATC-			
30	LEDK7	LED cathode 8, 125			
31	LEDK3	LED cathode 8, 2000			
32	LEDK4	LED cathode 4, 1000			

Note: No.8 is a missing number on the New Main FPC.

Wiring Diagram



KYOCERA

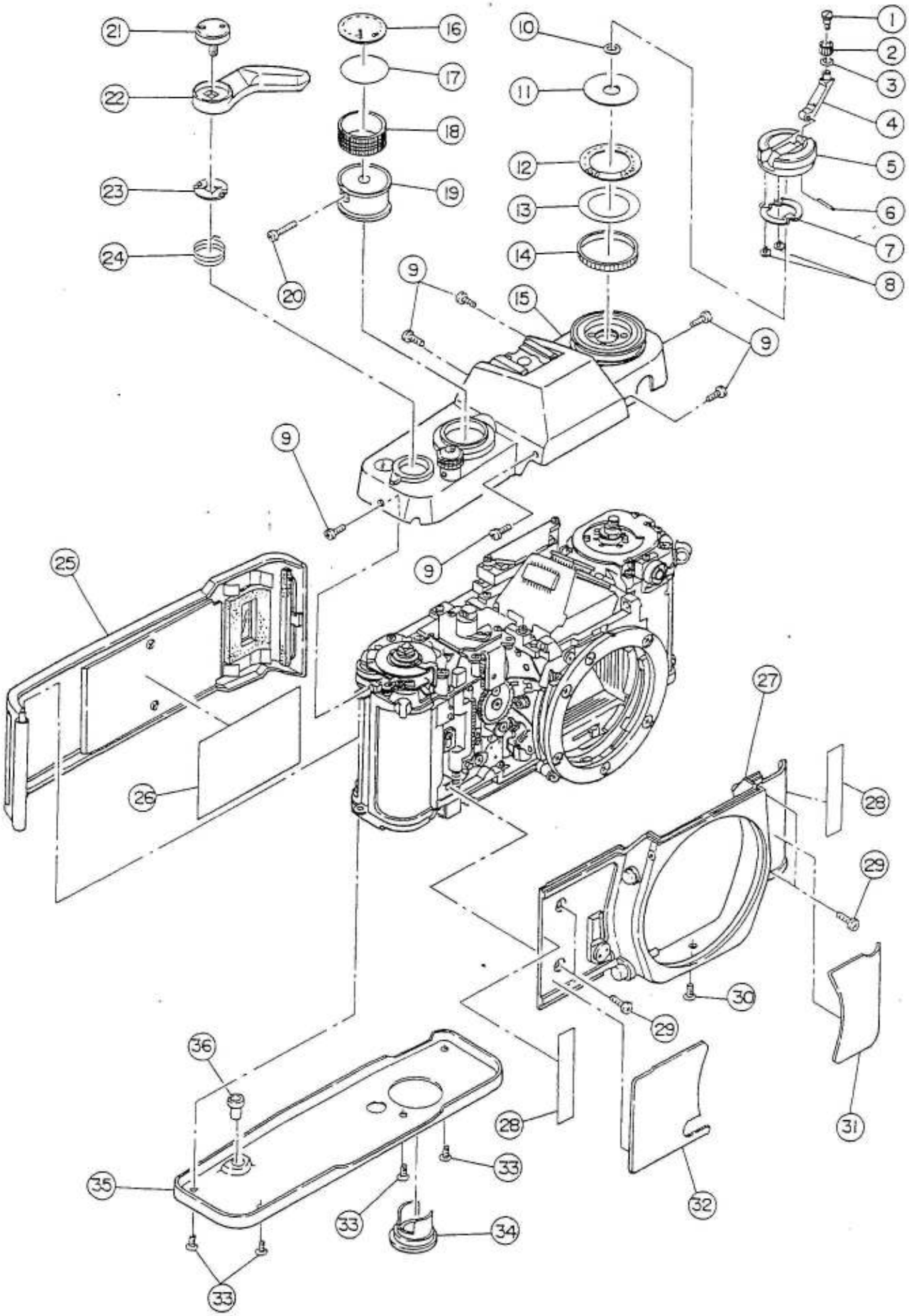
CONTAX S2

ASSEMBLING CHART

KYOCERA CORPORATION
Optical Equipments Group

No.1

REF No.1AE



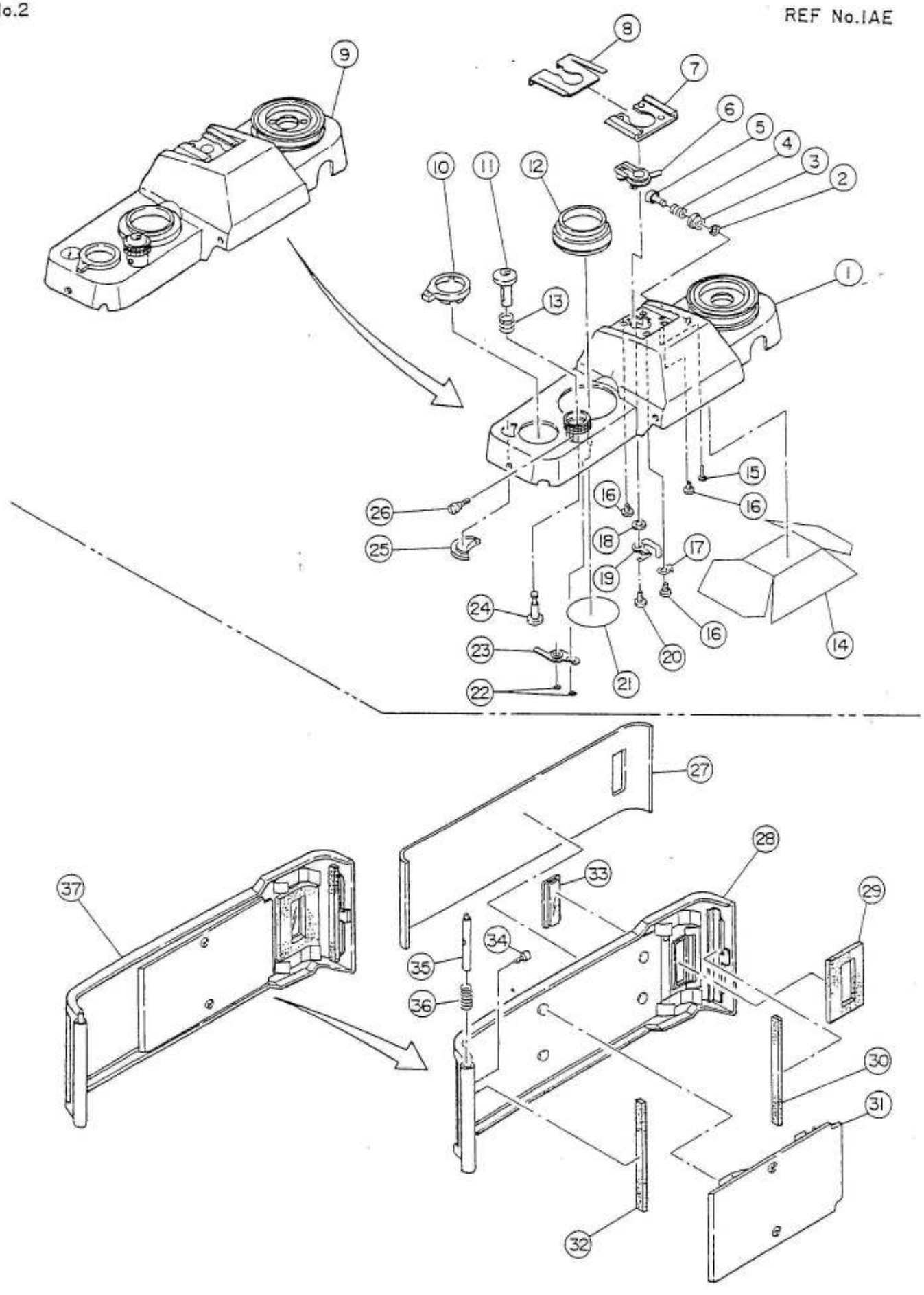
	PARTS NO.	DESCRIPTION	Q'TY
1	1AE43300	CRANK KNOB SCREW	1
2	1AE43200	CRANK KNOB	1
3	60141812	WASHER	1
4	1AE43111	CRANK ARM	1
5	1AE43011	REWIND KNOB	1
6	66670830	CRANK ARM PIN	1
7	13937312	CRANK ARM SPRING	1
8	61912522	CRANK ARM SPRING S.S	2
9	61913022	TOP COVER S.S	6
10	60253112	WASHER	1
11	1AE32620	SEAL RUBBER	1
12	1AE40500	ISO NAME PLATE	1
13	1AE40600	ISO ADHESIVE TAPE	1
14	1AE41600	ISO DIAL RUBBER	1
15	1AEAA230	TOP COVER ASS'Y	1
	1AEAA230M	TOP COVER ASS'Y (60 ANV)	1
16	1AE32400	S. DIAL NAME PLATE	1
17	1AE33800	S. ADHESIVE TAPE	1
18	1AE32500	S. DIAL RUBBER	1
19	1AE32320	S. DIAL	1
20	66001160	S. DIAL S.S	1
21	1AE63110	W. LEVER S.S	1
22	1AE63000	W. LEVER	1
23	1AE63400	W. LEVER SPRING PLATE	1
24	1AE63310	W. LEVER SPRING	1
25	*	BACK COVER ASS'Y (See Page 2)	1
26	16914500	PRESSURE PLATE SHEET	1
27	*	FRONT BASE ASS'Y (See Page 7)	1
28	1AE17200	FRONT BASE TAPE	2
29	61914026	FRONT BASE S.S	4
30	61819526	FRONT BASE S.S	1
31	1AE18800	FRONT LEATHER (RIGHT)	1
32	1AE18900	FRONT LEATHER (LEFT)	1
33	61812522	BOTTOM COVER S.S	4
34	1AEAA200	BATTERY CAP ASS'Y	1
35	1AE16020	BOTTOM COVER	1
36	1AE61520	SPROCKET BUTTON	1
1-8	1AEAA510	REWIND KNOB ASS'Y	1

Note : Parts marked * are not available.

Note : The Item No.28 is used to mend the difference of height between the Front Base and the leather surface of the Body.

No.2

REF No.1AE



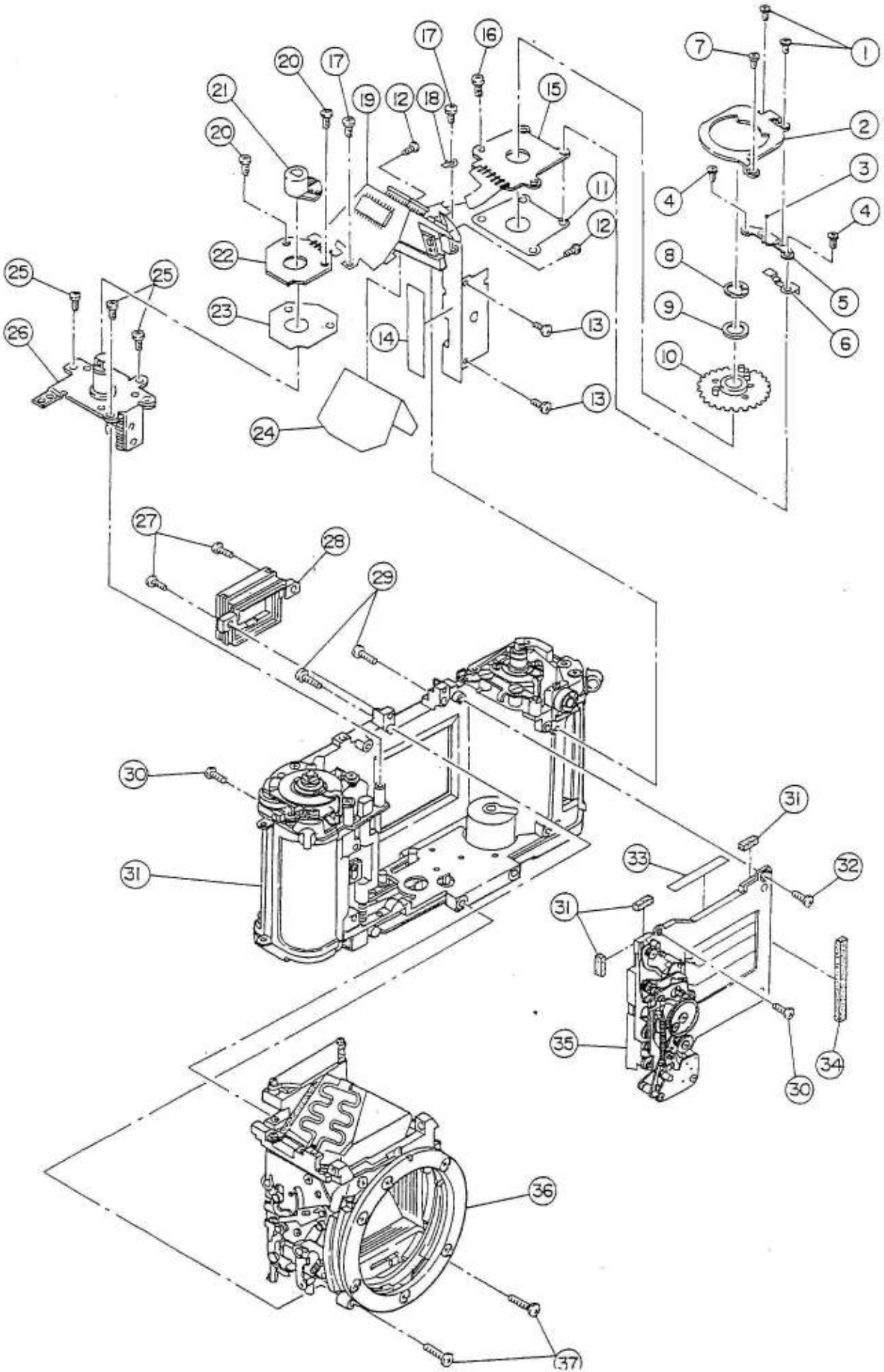
	PARTS NO.	DESCRIPTION	Q'TY
1	*	TOP COVER	1
2	66101222	E RING (E-12)	1
3	1AE15300	ISO LOCK BUTTON HOLDER	1
4	13919200	S. LOCK BUTTON SPRING	1
5	1AE15400	ISO LOCK BUTTON	1
6	1AEAA500	SHOE CONTACT ASS'Y	1
7	13916901	ACCESSORY SHOE	1
8	13917800	SHOE PLATE SPRING	1
9	1AEAA230	TOP COVER ASS'Y	1
	1AEAA230M	TOP COVER ASS'Y (60 ANV)	1
10	15966310	ME LEVER	1
11	1AE33030	RELEASE BUTTON	1
12	1AE32700	S. DIAL PROTECTOR	1
13	1AE33700	RELEASE BUTTON SPRING	1
14	1AE15700	TOP COVER INSULATION SHEET	1
15	1AA87200	SHOE CONTACT PLATE PIN	1
16	61911822	ACCESSORY SHOE S.S	3
17	14716300	SHOE LUG PLATE	1
18	60152112	WASHER	1
19	17423000	SHOE CONTACT PLATE (1) ASS'Y	1
20	61913026	ACCESSORY SHOE S.S	1
21	1AE32800	S. D. PROTECTOR SPRING	1
22	66100825	E RING (E-8)	2
23	1AEAA550	RELEASE STOPPER ASS'Y	1
24	1AE33100	RELEASE PIN	1
25	1AE15200	COUNTER WINDOW	1
26	1AE32920	RELEASE PIN S.S	1
27	1AE13300	BACK COVER LEATHER	1
28	*	BACK COVER	1
29	17417240	FILM CARTRIDGE MOQUETTE	1
30	13912901	BACK COVER LIGHT-PROOF MOQUETTE	1
31	1AEAA410	PRESSURE PLATE ASS'Y	1
32	13912801	BACK COVER MOQUETTE	1
33	1AE13600	FILM CARTRIDGE WINDOW	1
34	13113210	HINGE SHAFT STOPPER	1
35	13113000	HINGE SHAFT (1)	1
36	17417700	HINGE SHAFT SPRING	1
37	*	BACK COVER ASS'Y	1

27-30, 32-36	1AEAA210	BACK COVER ASS'Y	1

Note : Parts marked * are not availbale.

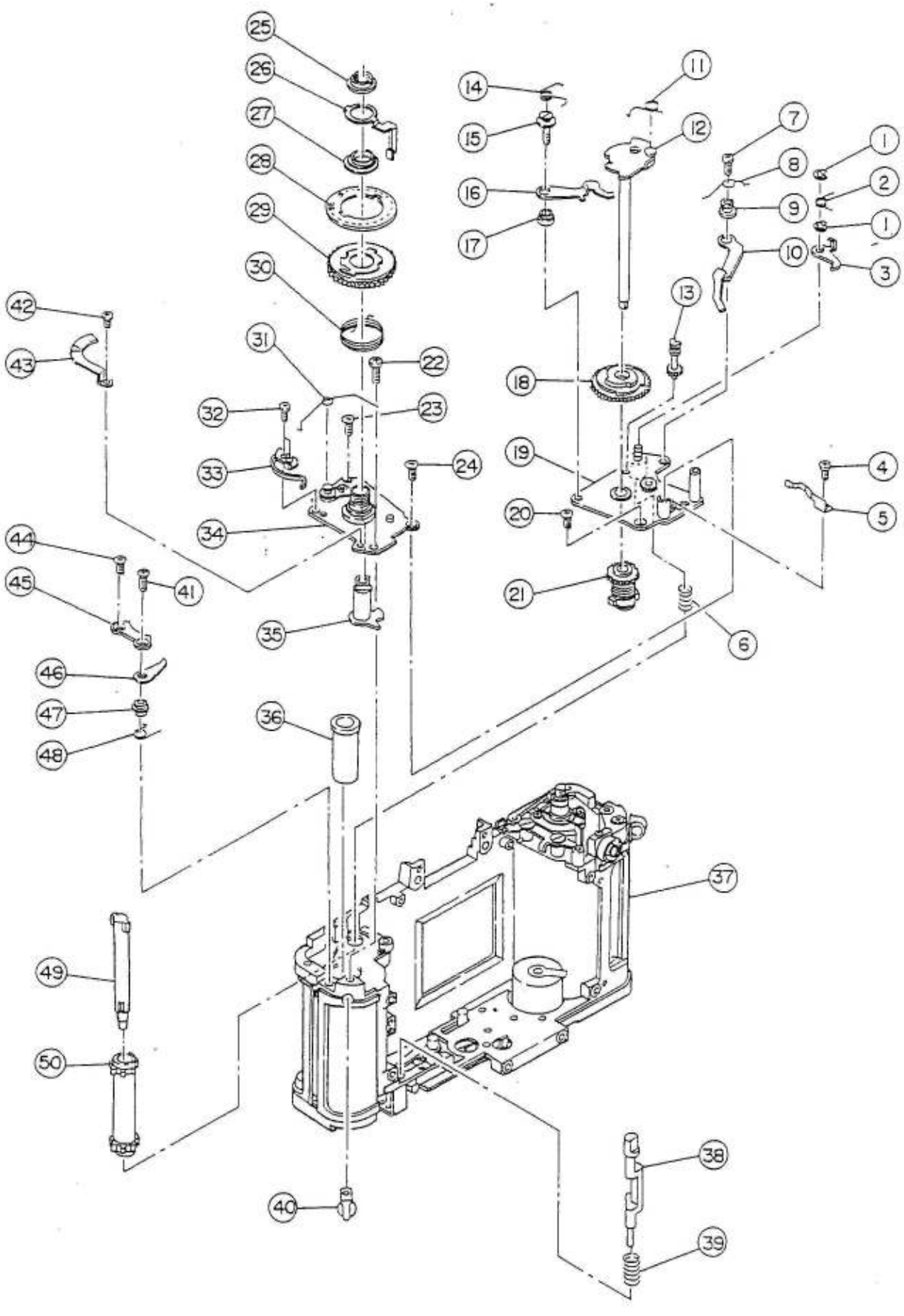
No.3

REF No.IAE



	PARTS NO.	DESCRIPTION	Q'TY
1	61911526	ISO TURNING LIMIT PLATE S.S	2
2	1AE42300	ISO TURNING LIMIT PLATE	1
3	66701220	STEEL BALL (ø1.2)	1
4	61912526	BALL HOLDER S.S	2
5	1AE42100	BALL HOLDER	1
6	1AE42200	ISO CLICK SPRING	1
7	61912526	ISO TURNING LIMIT PLATE S.S	1
8	66150625	CE SNAP RING	1
9	60156110	WASHER	1
10	1AEAA390	ISO CONTACT BASE ASS'Y	1
11	1AE51600	ISO INSULATION SHEET	1
12	66001163	S-LED S.S	2
13	61911526	MAIN FPC S.S	2
14	1AE50300	FPC INSULATION SHEET	1
15	1AE51520	ISO CODE BOARD	1
16	61912526	ISO CODE BOARD S.S	1
17	63913026	MAIN FPC S.S	2
18	14716300	LUG PLATE	1
19	1AEAE000	MAIN FPC ASS'Y	1
20	61812522	S. DIAL PC BOARD S.S	2
21	1AEAA220	S. CONTACT BASE ASS'Y	1
22	1AE51410	S. DIAL PC BOARD	1
23	1AE30300	S. INSULATION SHEET	1
24	17484210	PENTA PRISM COVER	1
25	61912222	S. DIAL BASE PLATE S.S	3
26	1AEAA250	S. DIAL BASE PLATE ASS'Y	1
27	66001122	EYE-PIECE FRAME S.S	2
28	17425500	EYE-PIECE FRAME	1
29	61927026	MIRROR BOX S.S	2
30	61924026	SHUTTER UNIT S.S	2
31	1AE10200	BODY MOQUETTE (A)	3
32	66001043	SHUTTER UNIT S.S	1
33	1AE20500	EYE-PIECE LIGHT-PROOF SHEET	1
34	17417300	LOCK CLAW MOQUETTE	1
35	1AE20100	SHUTTER UNIT	1
36	*	MIRROR BOX (See Page 8.9)	1
37	63929026	MIRROR BOX S.S	2

Note : Parts marked * is not available.
Note : The item No.18 cannot be used when the pattern of the Main FPC is changed.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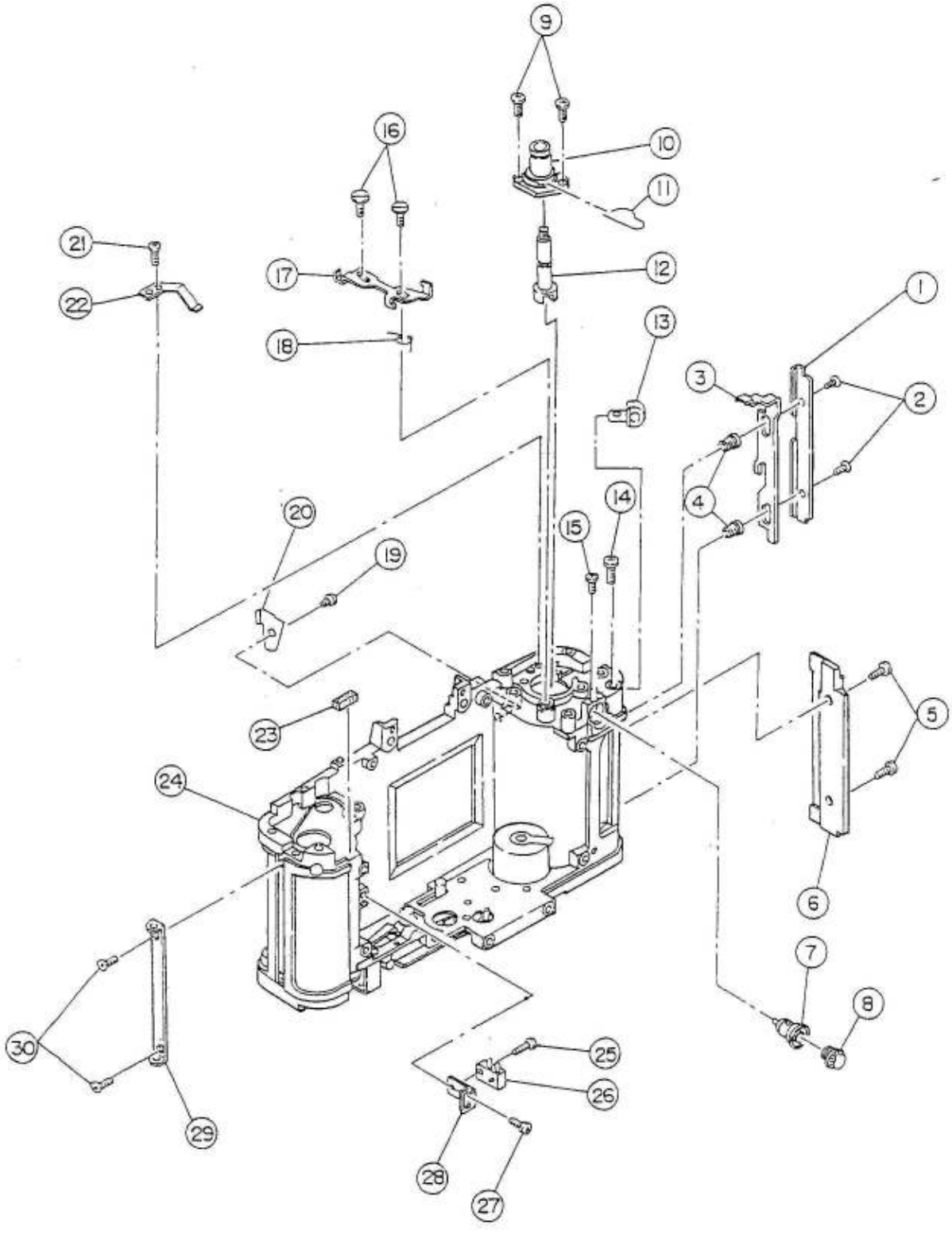
	PARTS NO.	DESCRIPTION	Q'TY
1	66101525	E RING (E-15)	2
2	15963500	IDLE GEAR CLAW SPRING	1
3	1AE61110	IDLE GEAR CLAW	1
4	61912026	ME BLOCK PLATE S.S	2
5	1AE67900	ME BLOCK PLATE	1
6	13965003	SPROCKET SPRING	1
7	61925026	ME INTERLOCK LEVER S.S	1
8	15966600	ME LEVER SPRING	1
9	1AE67400	ME INTERLOCK LEVER METAL	1
10	1AE67300	ME INTERLOCK LEVER	1
11	15962410	W. CLAW SPRING	1
12	1AEAA340	W. INTERLOCK PLATE ASS'Y	1
13	14786300	COUNTER GEAR (1)	1
14	13962810	ME CONNECTING LEVER SPRING	1
15	13964900	ME-W LEVER SHAFT (2)	1
16	1AE67610	ME-W LEVER	1
17	1AE67200	ME-W LEVER SHAFT	1
18	1AE60200	W. GEAR	1
19	*	W. BASE PLATE ASS'Y	1
20	61823526	W. BASE PLATE S.S	1
21	1AEAA360	SPOOL GEAR ASS'Y	1
22	63929026	STRAP HOLDER S.S	1
23	61823026	COUNTER BASE PLATE S.S	1
24	61813526	COUNTER BASE PLATE S.S	1
25	1AE63800	F. COVER RETAINING NUT	1
26	1AE67800	ME COUPLING LEVER	1
27	1AE67710	ME COUPLING RING	1
28	15989200	COUNTER NAME PLATE	1
29	1AE36310	COUNTER GEAR (2)	1
30	1AE36620	COUNTER SPRING	1
31	1AE36910	C. RELEASE LEVER SPRING	1
32	61902026	W. HANGAR SPRING S.S	2
33	1AE63630	W. HANGAR SPRING	1
34	1AEAA450	COUNTER BASE PLATE (K) ASS'Y	1
35	1AE06100	W. SHAFT (A) ASS'Y	1
36	15662200	INSIDE SPOOL	1
37	*	BODY	1
38	1AE34010	RELEASE SHAFT	1
39	1AE34100	RELEASE SHAFT SPRING	1
40	1AA10510	STRAP HOLDER	1
41	61824022	W. STOPPER S.S	1
42	61902026	COUNTER INDICATER S.S	1
43	1AE36520	COUNTER INDICATER	1
44	61823026	W. STOPPER S.S	1
45	1AE64000	W. STOPPER	1
46	1AE64100	ANTI-REVERSING LEVER	1
47	1AE64200	ANTI-REVERSING COLLAR (UPPER)	1
48	13965810	ANTI-REVERSING LEVER SPRING	1
49	15964700	SPROCKET SHAFT	1
50	15937020	SPROCKET	1
1-3, 19	1AEAA350	W. BASE PLATE ASS'Y	1

Note : Parts marked * are not available.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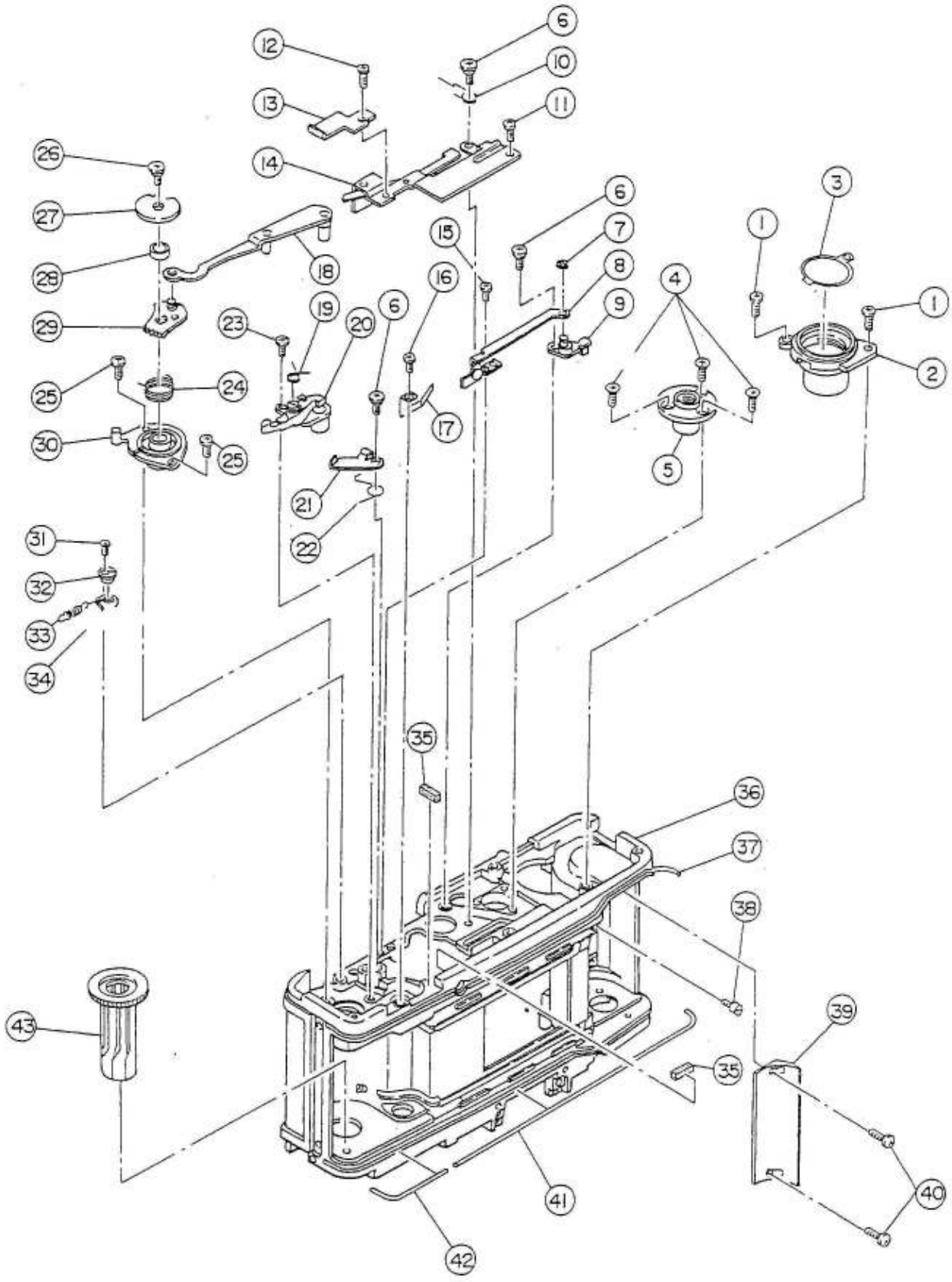
	PARTS NO.	DESCRIPTION	Q'TY
1	1AE10500	LOCK PLATE COVER	1
2	61812529	LOCK PLATE COVER S.S	2
3	13912010	BACK COVER LOCK PLATE	1
4	1AE12400	BACK COVER LOCK PLATE SHAFT	1
5	66001068	FRONT BASE (S) S.S	2
6	1AE17100	FRONT BASE (S)	1
7	1AEAA380	SYNCHRO SOCKET ASS'Y	1
8	13913800	SYNCHRO CAP	1
9	61924026	REWIND SHAFT HOLDER S.S	2
10	1AE43620	REWIND SHAFT HOLDER	1
11	13934310	REWIND SHAFT SPRING	1
12	15934200	REWIND SHAFT	1
13	1AA10510	STRAP HOLDER	1
14	63929026	STRAP HOLDER S.S	1
15	61913022	SYNCHRO SOCKET S.S	1
16	1AE41420	ISO STOPPER LEVER S.S	2
17	1AE41230	ISO STOPPER LEVER	1
18	1AE35230	ISO STOPPER LEVER SPRING	1
19	61911526	CARTRIDGE GUIDE S.S	1
20	1AE10700	CARTRIDGE GUIDE	1
21	61912522	LOCK PLATE SPRING S.S	1
22	13912100	LOCK PLATE SPRING	1
23	1AE10200	BODY MOQUETTE (A)	1
24	*	BODY	1
25	61914526	EXPOSURE CHECK SWITCH S.S	1
26	1AE34200	EXPOSURE CHECK SWITCH	1
27	66001090	CHECK SWITCH PLATE S.S	1
28	1AE34400	CHECK SWITCH PLATE	1
29	1AE10400	HINGE SHAFT HOLDER	1
30	61813022	HINGE SHAFT HOLDER S.S	2

Note : Parts marked * is not available.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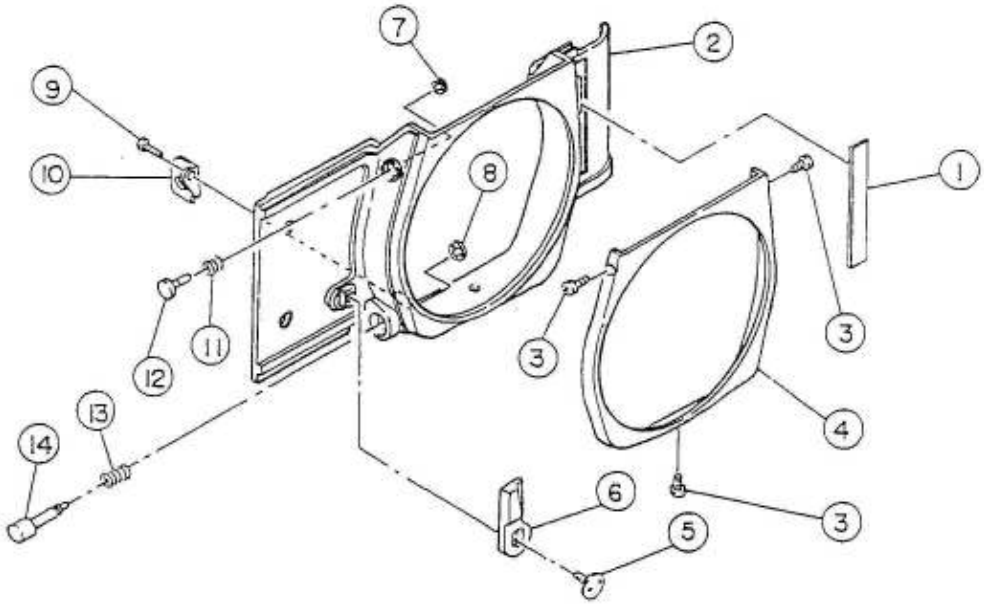
	PARTS NO.	DESCRIPTION	Q'TY
1	61914026	BATTERY CASE S.S	2
2	*	BATTERY CASE	1
3	1AE12310	BATTERY CASE CONTACT (B)	1
4	61824022	TRIPOD SOCKET S.S	3
5	1AE10300	TRIPOD SOCKET	1
6	14743710	SR LEVER (3) SHAFT SCREW	3
7	66001225	E RING (E-12)	1
8	1AEAA310	SR LEVER ASS'Y	1
9	1AEAA300	SR LEVER (3) ASS'Y	1
10	14761400	WINDING STOPPER LEVER SPRING	1
11	61913026	WINDING STOPPER LEVER S.S	1
12	61914026	SR LOCK LEVER RETAINER S.S	1
13	1AE22300	SR LOCK LEVER RETAINER	1
14	1AEAA280	WINDING STOPPER LEVER ASS'Y	1
15	61912026	SR LEVER ASS'Y S.S	1
16	66001041	SPROCKET RELEASE SPRING S.S	1
17	1AE61400	SPROCKET RELEASE SPRING	1
18	1AEAA290	SM SET LEVER ASS'Y	1
19	15967700	OR STOP LEVER SPRING	1
20	1AEAA320	SPROCKET METAL ASS'Y	1
21	14743900	SR LOCK LEVER	1
22	14744000	SR LOCK SPRING	1
23	63912526	SPROCKET METAL S.S	1
24	15262200	WINDING SPRING	1
25	66001068	WINDING SHAFT HOLDER S.S	2
26	66001037	SET CAM FIXER S.S	1
27	14761022	SET CAM FIXER	1
28	14767110	SET CAM RING	1
29	1AEAA330	SET CAM PLATE ASS'Y	1
30	15661100	WINDING SHAFT HOLDER	1
31	61813526	ANTI-REVERSING CLAW S.S	1
32	14763700	ANTI-REVERSING CLAW COLLAR	1
33	14763600	ANTI-REVERSING CLAW SPRING	1
34	14763800	ANTI-REVERSING CLAW	1
35	1AE10200	BODY MOQUETTE (A)	2
36	*	BODY	1
37	1AE12810	BODY SHIELD (LOWER)	1
38	1AA11100	FILM GUIDE PIN	1
39	1AE11000	REGISTER COVER	1
40	63913526	REGISTER COVER S.S	2
41	1AE12720	BODY SHIELDE (UPPER)	1
42	1AE12900	BODY SHIELD (S)	1
43	15964101	OUTSIDE SPOOL	1
2,3	1AEAA270	BATTERY CASE ASS'Y	1

Note : Parts marked * are not available.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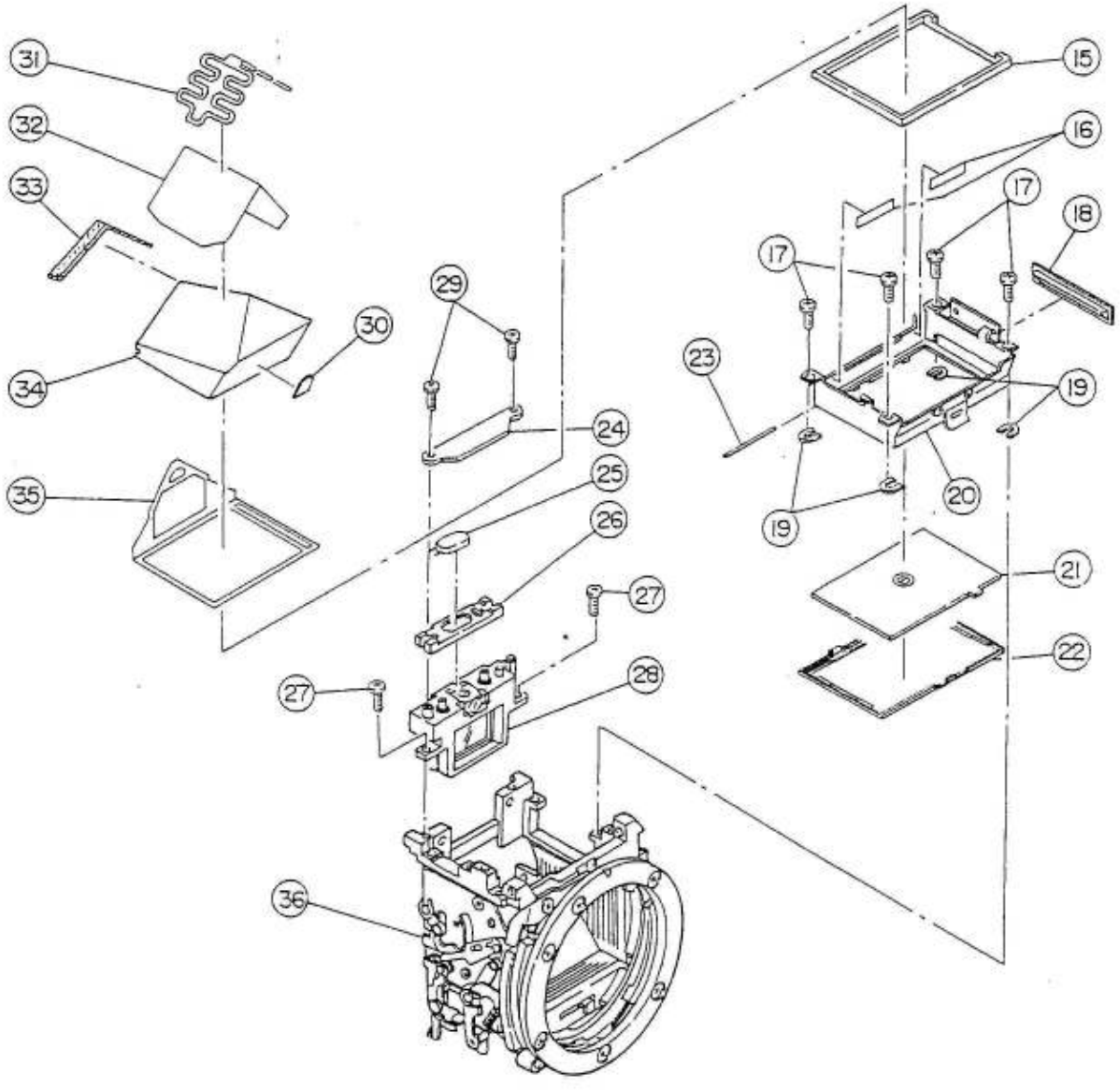
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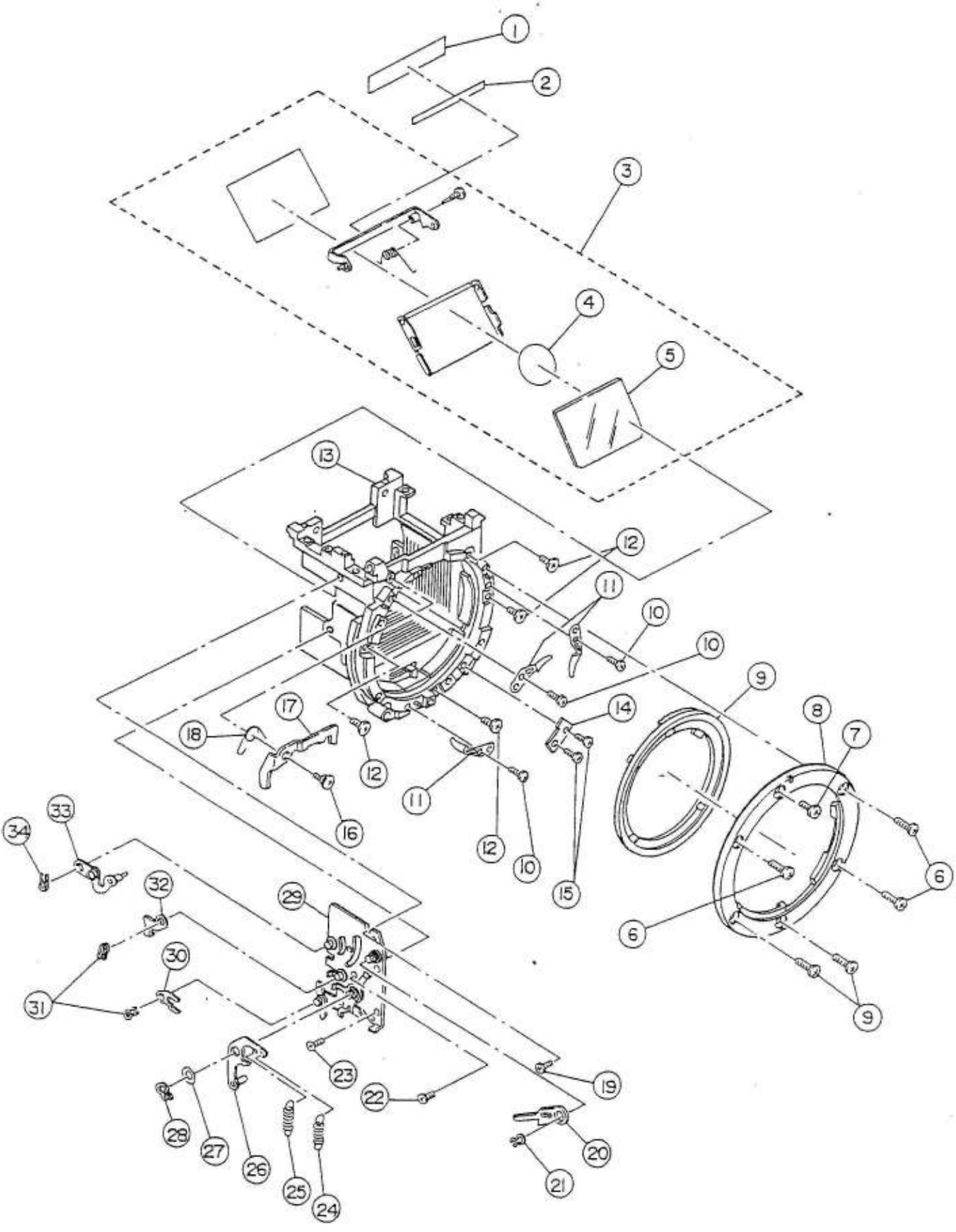
	PARTS NO.	DESCRIPTION	Q'TY
1	1AE16910	PATTERN COVER	1
2	*	FRONT BASE	1
3	69102062	FRONT COVER S.S	3
4	1AE17520	FRONT COVER	1
5	1AE18100	SELF-TIMER LEVER S.S	1
6	1AE18000	SELF-TIMER LEVER	1
7	66101225	E RING (E-12)	1
8	66102025	E RING (E-20)	1
9	69103066	APERTURE BUTTON HOLDER S.S	1
10	1AE17900	APERTURE BUTTON HOLDER	1
11	13181800	LENS LOCK BUTTON SPRING	1
12	17422401	LENS LOCK BUTTON	1
13	17418700	APERTURE BUTTON SPRING	1
14	1AE17740	APERTURE BUTTON	1
15	1AE84600	PENTA SPACER	1
16	1AE84900	PRISM SPACER	2
17	63913526	PENTA PRISM HOLDER S.S	4
18	1AE84700	S. INDICATER PRISM	1
19	13987200	FOCUS ADJUSTMENT WASHER (t:0.2)	4
	13987400	FOCUS ADJUSTMENT WASHER (t:0.3)	4
	13984000	FOCUS ADJUSTMENT WASHER (t:0.4)	4
	13987100	FOCUS ADJUSTMENT WASHER (t:0.5)	4
	13989400	FOCUS ADJUSTMENT WASHER (t:0.6)	4
	13989800	FOCUS ADJUSTMNET WASHER (t:0.7)	4
20	1AE08100	PENTA PRISM HOLDER ASS'Y	1
21	17484900	FOCUSING GLASS	1
22	1AE84300	PG HOLDER	1
23	17486200	PG PIN	1
24	17424500	SHOE CONTACT HOLDER	1
25	1AEAE200	SPD ASS'Y	1
26	1AE85100	LIGHT SENSOR HOLDER	1
27	61914026	EYE-PIECE HOLDER ASS'Y S.S	2
28	1AEAB160	EYE-PIECE HOLDER ASS'Y	1
29	69114076	SHOE CONTACT HOLDER S.S	2
30	1AA82200	PENTA PRISM RETAINING PLATE	1
31	15986200	PENTA PRISM FIXER	1
32	17484210	PENTA COVER	1
33	13985800	PENTA DUST-PROOF MOQUETTE	1
34	1AE84200	PENTA PRISM	1
35	1AE84510	FINDER MASK FRAME	1
36	1AEAB010	MIRROR BOX ASS'Y (See Page 8,9)	1
2,5-14	1AEAA240	FRONT BASE ASS'Y	1

Note : Parts marked * is not available.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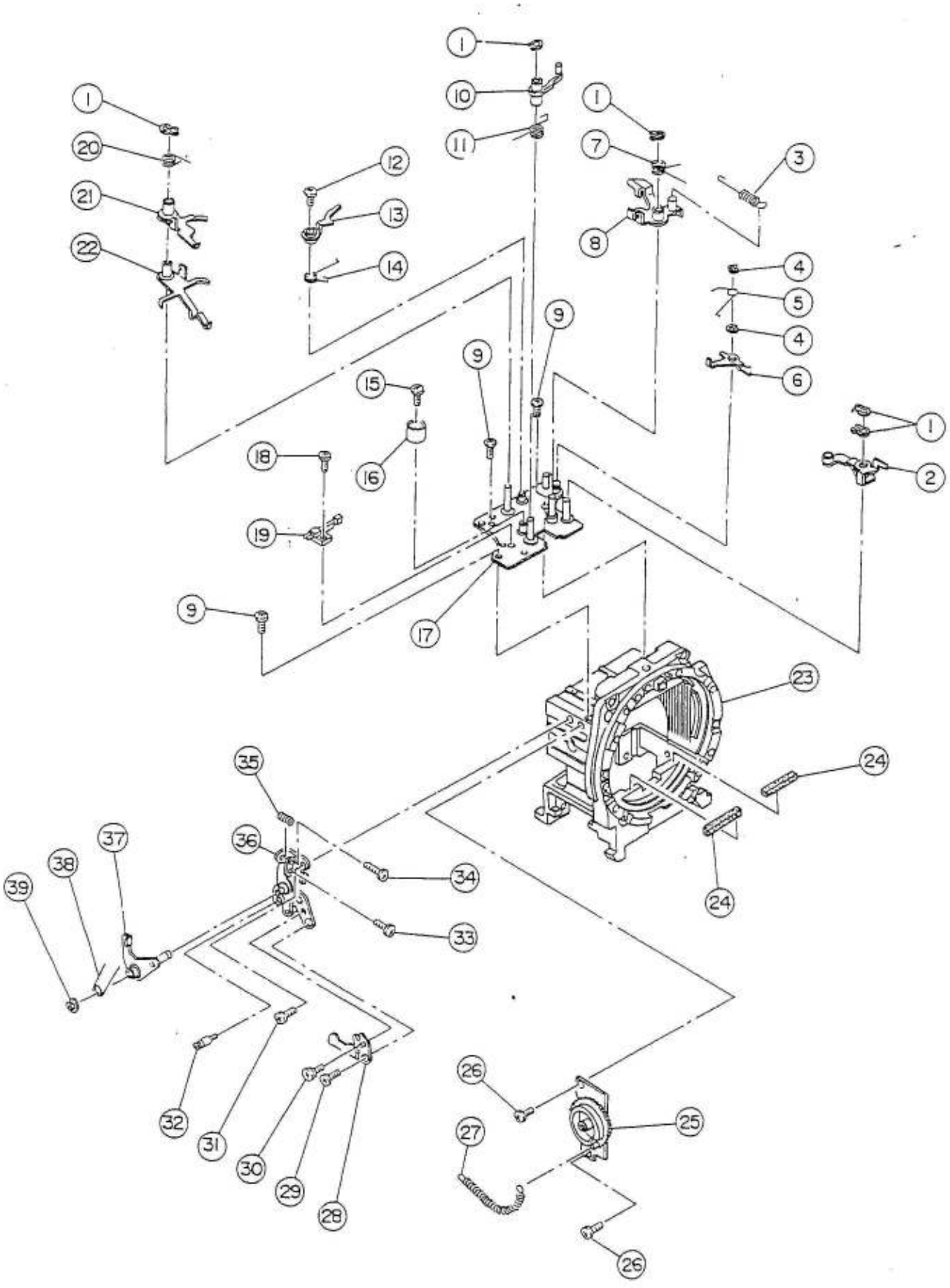
	PARTS NO.	DESCRIPTION	Q'TY
1	15987800	S. LIGHT-PROOF PLATE	1
2	15987910	S. LIGHT-PROOF PLATE TAPE	1
3	1AEAB060	MIRROR FRAME ASS'Y	1
4	13977400	MIRROR ADHESIVE TAPE	1
5	17480100	MIRROR	1
6	61925522	BODY MOUNT S.S	5
7	66001138	BODY MOUNT S.S	1
8	1AE81000	BODY MOUNT	1
9	13982310	F. STOP CONNECTING RING	1
10	61913026	MOUNT SPRING S.S	3
11	13981230	MOUNT SPRING	3
12	66001041	F. STOP CONNECTING RING S.S	4
13	*	MIRROR BOX	1
14	13981301	MOUNT STOPPER	1
15	61913026	MOUNT STOPPER S.S	2
16	14781600	LOCK LEVER SHAFT	1
17	1AE80700	LOCK LEVER	1
18	14781700	LOCK LEVER SPRING	1
19	63911526	MC BASE PLATE S.S	1
20	13976422	MCL-3	1
21	66172522	GS RING (GS-25)	1
22	61912026	MC BASE PLATE S.S	1
23	61812526	MC BASE PLATE S.S	1
24	13976100	MC RESTORE SPRING	1
25	13976000	MC DRIVING SPRING	1
26	06529700	MCL-1 ASS'Y	1
27	60223122	WASHER	1
28	66173022	GS RING (GS-30)	1
29	*	MC BASE PLATE	1
30	1AE74100	MCL-7	1
31	66172022	GS RING (GS-20)	2
32	13977020	MCL-5	1
33	06521400	MCL-4 ASS'Y	1
34	66172022	GS RING (GS-20)	1
20, 21, 24-32	06519500	MC BASE PLATE ASS'Y	1
1-34	1AEAB010	MIRROR BOX ASS'Y (See Page 9)	1

Note : Parts marked * are not available.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	PARTS NO.	DESCRIPTION	Q'TY
1	66172022	GS RING (GS-20)	5
2	1AEAB100	QRL-7 ASS'Y	1
3	1AE80400	QRL-2 SPRING	1
4	66101525	E RING (E-15)	2
5	13973210	QRL-6 SPRING	1
6	13973120	QRL-6	1
7	13971620	QRL-1 SPRING	1
8	06520100	QRL-1 ASS'Y	1
9	61912026	QR BASE PLATE S.S	3
10	14772500	QRL-4	1
11	1AE72600	QRL-4 SPRING	1
12	66001046	QRL-5 S.S	1
13	1AEAB120	QRL-5 ASS'Y	1
14	15978730	QRL-5 SPRING	1
15	66001046	QR STOPPER S.S	1
16	1AE71010	QR STOPPER	1
17	*	QR BASE PLATE	1
18	61922526	REVOLVING LIMIT SWITCH S.S	1
19	1AA57310	REVOLVING LIMIT SWITCH	1
20	13972430	QRL-3 SPRING	1
21	06520200	QRL-2 ASS'Y	1
22	1AEAB110	QRL-3 ASS'Y	1
23	*	MIRROR BOX	1
24	1AE80510	MIRROR CUSHION	2
25	1AEAB040	AVR ASS'Y	1
26	61912026	AVR ASS'Y S.S	2
27	14783000	APERTURE RESISTOR SPRING	1
28	1AEAB050	ML-6 ASS'Y	1
29	63911526	ML-6 S.S	1
30	13983400	ML-6 S.S	1
31	61812526	ML BASE PLATE S.S	1
32	1AE80600	AVR SPRING POST	1
33	63914526	ML BASE PLATE SCREW	1
34	63915522	ML BASE PLATE SCREW	1
35	13983300	ML BASE PLATE SPRING	1
36	*	ML BASE PLATE	1
37	1AEAB130	ML-5 ASS'Y	1
38	1AE80300	ML-4/5 SPRING	1
39	66101525	E RING (E-15)	1

1-8, 10-22	1AEAB020	QR BASE PLATE ASS'Y	1
33-39	1AEAB039	ML BASE PLATE ASS'Y	1
1-39	1AEAB010	MIRROR BOX ASS'Y (See Page 8)	1

Note : Parts marked * are not available.

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